DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

DIVISION OF WASTE AND HAZARDOUS SUBSTANCES

Tank Management Section

1351 Underground Storage Tank Systems

Part A: General Requirements For Underground Storage Tank Systems

1.0 General Provisions

1.1 Statement of Authority and Purpose

1.1.1 These Regulations are enacted in accordance with 7 **Del.C.** Chapter 60, *Environmental Control*, and 7 **Del.C.** Chapter 74, *Delaware Underground Storage Tank Act*.

1.1.2 The Delaware Department of Natural Resources and Environmental Control (DNREC) is responsible for protecting, preserving and enhancing the environmental quality of the water, air, and land of the State. The Department recognizes that groundwater quality protection and improvement is an important goal. In addition, the General Assembly of the State of Delaware has found "that it is necessary to provide for more stringent control of the installation, operation, Retrofitting and abandonment of Underground Storage Tanks (USTs) to prevent leaks, and where leaks should occur, to detect them at the earliest possible stage and thus minimize further degradation of groundwater." The Delaware *Regulations Governing Underground Storage Tank Systems* are intended to address Releases from UST systems as well as prevent future Releases.

1.1.3 The intent of the Department with these Regulations is three fold. First, to ensure the detection of any Release. This will be achieved by ensuring an acceptable design and installation of new UST Systems and improvement of all UST Systems. Second, to prevent the Release of Regulated Substance to the environment by requiring UST Systems be designed to contain a Release. Finally, to assess and address potential risks of Releases to provide for the protection of human health, safety, and the environment.

1.2 Applicability

1.2.1 The requirements of these Regulations shall apply to any Person, including without limitation to all Owners and Operators of an UST System as defined in 7 **Del.C.** §7402 herein unless specifically exempted. The following UST Systems shall only be subject to the requirements of Part A, subsection 4.10, and Section 12.0 and Part B, subsection 4.6, and Part C, subsection 4.5, and Part D, subsection 3.6, and Part E of these Regulations:

1.2.1.1 Agricultural/Farm and residential UST Systems of one thousand one hundred (1,100) gallons or less used for storing Motor Fuels for Non Commercial purposes.

1.2.1.2 UST Systems containing Heating Fuel of one thousand one hundred (1,100) gallons or less for Consumptive Use On The Premises Where Stored.

1.2.1.3 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.

1.2.1.4 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.

1.2.1.5 Equipment and machinery that contains Regulated Substances for operational purposes such as Hydraulic Lift Tanks and electrical equipment tanks.

1.2.1.6 Any UST System whose capacity is 110 gallons or less.

1.2.1.7 Any emergency spill or overflow containment UST System that is expeditiously Emptied after use.

1.2.2 The requirements contained in these Regulations, with the exception of requirements in Part A, subsection 1.3 and Part E of these Regulations, do not apply to any of the following UST Systems:

1.2.2.1 Any UST System containing radioactive material that is regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011).

1.2.2.2 Any UST system that is part of an emergency generator system at nuclear power plant generation facilities licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including 10 CFR part 50.

1.2.2.3 Any Wastewater Treatment Tank system not covered under Part A, subsection 1.2.1.4.

1.2.2.4 Aboveground storage tanks associated with:

1.2.2.4.1 Airport Hydrant Fuel Systems as defined by these Regulations and prescribed in Part I; and

1.2.2.4.2 UST Systems with Field-Constructed Tanks as defined by these Regulations and prescribed in Part H.

1.3 Installation Requirements for Partially Excluded UST Systems

1.3.1 No Person shall install an UST System as described under Part A, subsection 1.2.2 for the purpose of storing Regulated Substances unless the UST System:

1.3.1.1 Will prevent Releases due to corrosion or structural failure for the Operational Life of the UST System; and

1.3.1.2 Is Cathodically Protected against corrosion, constructed of non corrodible material, steel clad with a non corrodible material, or designed in a manner to prevent the Release or threatened Release of any stored substance; and

1.3.1.3 Is constructed or lined with material that is Compatible with the stored substance.

1.4 Enforcement

1.4.1 Any Person who violates these Regulations shall be subject to all appropriate legal sanctions including the provisions set forth in 7 **Del.C.** Chapter 74, §7411 or 7 **Del.C.** Chapter 60.

1.4.2 The Department reserves the right to prohibit delivery or dispensing of a Regulated Substance or require an UST System tightness test in accordance with these Regulations when:

1.4.2.1 A Department representative cannot determine that an UST Facility is in compliance with these Regulations based upon the information made available by the Owner and Operator; or

1.4.2.2 A Department representative determines that a Facility is not in compliance with these Regulations; or

1.4.2.3 An Imminent Threat to human health, safety or the environment exists.

1.5 Severability

1.5.1 If any provisions of these regulations are adjudged to be unconstitutional or invalid by a court of competent jurisdiction, the remainder of these Regulations shall not be affected thereby.

1.6 Right of Appeals

1.6.1 Any Person or party whose interest is substantially affected by any action of the Secretary may appeal to the Environmental Appeals Board in accordance with 7 **Del.C.** Chapter 60, *Environmental Control*, §6008.

1.6.2 Any Person or party to an appeal before the Environmental Appeals Board who is substantially affected by a decision of the Environmental Appeals Board may appeal to the Superior Court in accordance with 7 **Del.C.** Chapter 60, *Environmental Control*, §6009.

1.7 Joint and Several Liability

1.7.1 Throughout these Regulations, Owners and Operators are jointly and severally liable for all duties and requirements. When used in these Regulations, "Owners or Operators" shall mean that the Owners and Operators are jointly and severally liable for the applicable duties and requirements.

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2.0 Definitions

The following words, terms and phrases have the meaning ascribed to them in this Section.

"**Accidental Release**" means any sudden or non-sudden release of Regulated Substance arising from operating an UST System that results in a need for Corrective Action, or compensation for Bodily Injury or Property Damage neither expected nor intended by the Tank Owner or Operator.

"**Agricultural/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. An Agricultural/Farm Tank shall be located on the farm property. "Agricultural/Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

"**Airport Hydrant Fuel System**" means a UST System which fuels aircraft and operates under high pressure with large diameter Piping that typically terminates into one or more hydrants, also known as fill stands. The Airport Hydrant Fuel System begins where fuel enters one or more Tanks from an external source such as a pipeline, barge, rail car, or other Motor Fuel carrier.

"**Ancillary Equipment**" means any devices including 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.

"**API**" means American Petroleum Institute.

"**ASTM**" means American Society for Testing and Materials.

"**Beneath the Surface of the Ground**" means beneath the ground surface or otherwise covered with earthen materials.

"**Bodily Injury**" shall have the meaning given to this term by 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.

"**Cathodic Protection**" or "**Cathodically Protected**" means a technique to prevent the corrosion of a metal surface by making that surface the cathode of an electrochemical cell. Protection can be accomplished by means of an impressed current system or a Sacrificial Anode system.

"**CERCLA**" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

"**Change In Service**" means a change in status of the UST System from either In Service to Out Of Service or a change in status of the UST System from Out Of Service to In Service.

"**Change in Substance Stored**" means the exchange of one substance stored in an UST System for another.

"**Chief Financial Officer**" in the case of Local Government owners and operators, means the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the Local Government.

"**Class A Operator**" means the individual who has primary responsibility to operate and maintain the UST System in accordance with applicable requirements established by the Department. The class A Operator typically manages resources and personnel, such as establishing work assignments, to achieve and maintain compliance with regulatory requirements.

"**Class B Operator**" means the individual who has Day to Day responsibility for implementing applicable regulatory requirements established by the Department. The Class B Operator typically implements in-field aspects of operation, Maintenance, and associated recordkeeping for the UST System.

"**Class C Operator**" means the individual responsible for initially addressing emergencies presented by a spill or Release from an UST System. The Class C Operator typically controls or monitors the dispensing or sale of Regulated Substances.

"**Closed In Place**" means the cleaning and filling of an UST System through the use of prescribed techniques to render it permanently unfit for service.

"**Compatible**" or "**Compatibility**" 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 UST System under conditions likely to be encountered in the UST System.

"**Conceptual Site Model**" or "**CSM**" means a comprehensive graphical model and written and summary describing what is known or hypothesized about environmental contamination at a site and the relationship among key site information that are pertinent to decision-making. A CSM is a model or representation that evolves over the life cycle of site investigation and cleanup efforts and provides a platform for evaluating the data gaps and related uncertainty associated with site history and operations; geology, hydrogeology and hydrology; contaminant sources, release mechanisms and fate and transport; potential receptors and exposure pathways.

"**Connected Piping**" means all Piping including valves, elbows, joints, flanges, and flexible connectors attached to an UST 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.

"**Consumptive Use**" with respect to Heating Fuel means consumed On The Premises Where Stored for any activities that do not result in monetary gain.

"**Consumptive Use Heating Fuel UST System**" means an UST System that contains Heating Fuel that is used solely for the operation of equipment used for the generation of heat, is connected directly or via a day tank to the heat generating equipment, and is for Consumptive Use On The Premises Where Stored.

"**Containment Sump**" means a Liquid Tight container that protects the environment by containing leaks and spills of Regulated Substances from Piping, Dispensers, pumps and related components in the containment area. Containment Sumps may be single walled or Secondarily Contained and located at the top of the Tank

(Tank top or submersible turbine pump sump), underneath the Dispenser (Under- Dispenser Containment Sump), or at other points in the Piping Run (transition or intermediate sump).

"**Controlling Interest**" means direct ownership of at least fifty percent (50%) of the voting stock of another entity.

"**Corrective Action**" means the sequence of actions, or process that includes confirming a Release, Site Assessment, interim Remedial Action, Remedial Action, monitoring, and Termination of the Remedial Action.

"**Day**" means a calendar Day; however, when used to determine when a document is due and the Day falls on the weekend or a holiday, the document may be submitted on the first working Day after the weekend or holiday.

"**Department**" means the Department of Natural Resources and Environmental Control.

"**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 (e.g., Tank from Piping).

"**Dispenser**" means equipment located aboveground that dispenses Regulated Substances from the UST System.

"**Dispenser System**" means the Dispenser, check valves, product shear valves, vapor shear valves, unburied risers, flexible connectors, and any other transitional components that connect the Dispenser to the underground associated with the UST System.

"**Domestic Well**" means a well primarily used for potable non-public water supply purposes and which may be used for non-potable purposes, excluding heat pump supply.

"**Electrical Equipment**" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

"**Electrically Isolated**" means the electrical separation of the Underground Storage Tank from the Piping and from other metallic structures and the environment by means of a nonconductive fitting or bushing.

"**Empty**" or "**Emptied**" means all Regulated Substances have been removed from the UST System using commonly employed practices so that no more than one inch (1) or 2.5 centimeters of residue, or three tenths of one percent (0.3%) by weight of the total capacity of the UST System, remains in the UST System.

"**Excavation Zone**" means the volume containing the UST 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.

"**Facility**" means any location or part thereof containing one or more Underground Storage Tank Systems.

"**Field-Constructed Tank**" means an Underground Storage Tank constructed in the field, such as an Underground Storage Tank constructed of concrete that is poured in the field, or a steel or fiberglass Underground Storage Tank primarily fabricated in the field.

"**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:

(1) A 10 K report submitted to the SEC; or

(2) An annual report of Tangible Net Worth submitted to a recognized rating service such as Dun and Bradstreet; or

(3) Annual reports submitted to the Energy Information Administration or the Rural Utilities Service. Financial Reporting Year may thus comprise a fiscal or a calendar year period.

"**Flow-Through Process Tank**" is a stationary structure 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 stationary structures 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.

"**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.

"**Hazardous Substance**" means a substance as defined in 101(14) of the CERCLA, or any mixture of such Hazardous Substance and petroleum, but not including any substance regulated as a hazardous waste under RCRA Subtitle C.

"**Hazardous Substance UST System**" means an UST System that contains a Hazardous Substance defined in 101(14) of the CERCLA, but not including any substance regulated as a hazardous waste under RCRA Subtitle C, or any mixture of such substances and petroleum, and which is not a Petroleum UST System.

"**Heating Fuel**" also known as heating oil, means petroleum that is one of eight technical grades. These grades are: No. 1; No. 2; No. 4 light; No. 4 heavy; No. 5 light; No. 5 heavy; No. 6 technical grade of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels used as substitutes for one of these fuels such as kerosene, Used Oil, diesel or biodiesel when used for heating purposes. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

"**Holder**" means a Person who, upon January 11, 2020 or in the future, maintains Indicia of Ownership primarily to protect a Security Interest in a Petroleum UST or UST system or Facility or property on which a Petroleum UST or UST system is located. A Holder includes the initial holder (such as a loan originator); any subsequent Holder (such as a successor-in-interest or subsequent purchaser of the security interest on the secondary market); a guarantor of an obligation, surety, or any other person who holds ownership indicia primarily to protect a security interest; or a receiver or other person who acts on behalf or for the benefit of a Holder.

"**Hydraulic Lift Tank**" means a stationary structure holding hydraulic fluid for a closed loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

"**Imminent Threat**" means an actual Release or a potential for a Release which requires action to prevent or mitigate damage to the environment or endangerment to public health or welfare.

"**Impervious Material**" means a material of sufficient thickness, density and composition that is impenetrable to the Regulated Substance, has a permeability of less than 1×10^{-7} cm/sec., and that will prevent the discharge to the lands, ground waters, or surface waters of the State of any Regulated Substance for a period of at least as long as the maximum anticipated time during which the Regulated Substance will be in contact with the material.

"**Indicia of Ownership**" means evidence of a secured interest, evidence of an interest in a security interest, or evidence of an interest in real or personal property securing a loan or other obligation, including any legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. Evidence of such interests include mortgages, deeds of trust, liens, surety bonds and guarantees of obligations, title held pursuant to a lease financing transaction in which the lessor does not select initially the leased property (hereinafter lease financing transaction), and legal or equitable title obtained pursuant to foreclosure. Evidence of such interests also includes assignments, pledges, or other rights to or other forms of encumbrance against property that are held primarily to protect a security interest. A person is not required to hold title or a security interest in order to maintain Indicia of Ownership.

"**Industrial Well**" means a well which is used in the processing, washing, packaging, or manufacturing of a product excluding food and beverages.

"**In Service**" means an UST System which is not abandoned, contains Regulated Substances or has Regulated Substances regularly added or withdrawn.

"**Institutional Controls**" means non-engineered instruments, such as administrative and legal controls including an Environmental Covenant (EC) as described in 7 **Del.C.** §§7907-7920, the Uniform Environmental Covenants Act (UECA).

"**Legal Defense Cost**" means any expense that an Owner, Operator or Provider of Financial Assurance incurs in defending against claims or actions brought by:

(1) EPA or Department to require Corrective Action or to recover the costs of Corrective Action; or
(2) On behalf of a third party for Bodily Injury or Property Damage caused by an Accidental Release; or
(3) Any Person to enforce the terms of a financial assurance mechanism.

"**Liquid Tight**" means Under-Dispenser Containment, UST top sumps and spill prevention equipment that are impervious to the substance contained, or to be contained, so as to prevent seepage of Regulated Substance from the containment into the environment and seepage of liquids from the environment into the containment.

"**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.

"**LNAPL**" means a Light Non-Aqueous Phase Liquid having a specific gravity less than one (1) and composed of one or more organic compounds that are immiscible or sparingly soluble in water. The term encompasses all potential Occurrences of LNAPL including free, mobile, and residual.

"**Mobile LNAPL**" means LNAPL that is hydraulically connected in the pore space, exceeds residual saturation, and has the potential to migrate.

"**LNAPL Body**" means the 3-dimensional form and distribution of LNAPL in the subsurface existing in any phase.

"**LNAPL Conceptual Site Model (LCSM)**" means a model describing the physical properties, chemical composition, Occurrence and geologic setting of the LNAPL Body from which estimates of flux, risk and potential Remedial Action can be generated. The LCSM may be a dynamic, living model that changes through time as a function of natural attenuation or engineered Remedial Action processes, or additional site knowledge.

"**Migrating LNAPL**" means LNAPL that is moving in the environment under prevailing hydraulic conditions.

"**Residual LNAPL**" means LNAPL that is hydraulically discontinuous and immobile under prevailing conditions. Residual LNAPL cannot move, but is a source for chemicals of concern dissolved in groundwater or in the vapor phase in soil gas. The Residual LNAPL saturation is a function of the initial or maximum LNAPL saturation and the porous medium.

"**Local Government**" shall have the meaning given this term by applicable State law and includes Indian tribes. The term is generally intended to include:

(1) Counties, municipalities, townships, separately chartered and operated special districts (including Local Government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by State charter or constitution; and

(2) Special districts and independent school districts established by counties, municipalities, townships, and other general purpose governments to provide essential services.

"**Maintenance**" means the operational upkeep as described by manufacturer's recommendations or the Department requirements to prevent an UST System from releasing product.

"**Marina Fueling Facility**" means any land-based fueling Facility that dispenses fuel over, adjacent to, or in close proximity to the water for the purpose of fueling watercraft.

"**Marina Underground Storage Tank System**" means any UST System and its associated Ancillary Equipment and containment system, if any, maintained and operated at a Marina Fueling Facility.

"**Monitor Well**" means a well installed in accordance with Delaware's Regulations Governing the Construction of Water Wells that will be used for the monitoring of ground water quality.

"**Motor Fuel**" means a complex blend of hydrocarbons typically used in operation of a motor engine, such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any blend containing one or more of these substances (for example: motor gasoline blended with alcohol).

"**Motor Oil**" means a petroleum product used to lubricate the internal parts of an engine. The term includes lubricating and operational fluids for the mechanical components associated with the engine, including any hydraulic, transmission, gear or braking systems.

"**NACE**" means National Association of Corrosion Engineers.

"**NFPA**" means National Fire Protection Association, Inc.

"**Non Commercial Purposes**" with respect to Motor Fuel means not for resale.

"**Non-Consumptive Use Heating Fuel UST System**" means an UST System that contains Heating Fuel that is not solely for Consumptive Use On The Premises Where Stored.

"**Observation Tube**" means a Release Detection device placed within the Excavation Zone which reaches the water table and can be inspected periodically to determine whether contamination of the aquifer by a Regulated Substance has occurred.

"**Occurrence**" means an accident, including continuous or repeated exposure to conditions, which results in a release from an UST System. This definition 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".

"**On The Premises Where Stored**" with respect to Heating Fuel means UST Systems located on the same property where the stored Heating Fuel is used.

"**Operational Life**" refers to the period beginning when installation of the UST System has commenced until the time the UST System is properly Removed or Closed In Place in accordance with the requirements of these Regulations.

"**Operator**" means any Person who has responsibility for the care, custody, and control of the daily operation of an UST System, including responsibility conferred by lease, contract or other form of authorization agreement.

"**Out Of Service**" means an UST System which:

(a) Is not in use; that is, which does not have Regulated Substances added to or withdrawn from the UST System, and

(b) Is intended to be placed back In Service.

"**Overfill Release**" is a Release that occurs when an Underground Storage Tank is filled beyond its capacity, resulting in a discharge of the Regulated Substance to the environment.

"**Owner**" means a Person who has or has had a legal interest in a Facility or UST System, or who has or has had an equitable interest in a Facility or UST System, except when a Person holds an interest in an UST System as a security interest, unless through foreclosure or other such action the Holder has taken possession of or operated the UST System; and in the case of an UST System in use on November 8, 1984, or brought into use after that date, any Person who owns an UST System used for storage, use, or dispensing of Regulated Substances; and in the case of any UST System in use before November 8, 1984 but no longer in use on that date, any Person who owned such UST System immediately before the discontinuation of its use.

"**Person**" means any individual, entity, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body, a consortium, a joint venture, a commercial organization, and the United States Government.

"**Person In Charge**" means the UST Owner or Person designated by the UST Owner, an UST Operator, or any Person delivering Regulated Substance to an UST, as the one with direct supervisory responsibility for an activity or operation at a Facility, such as the transfer of a Regulated Substance to or from any point in the Facility.

"**PEI**" means Petroleum Equipment Institute.

"**Petroleum Marketing Facility**" means 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.

"**Petroleum Marketing Firm**" means 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.

"**Petroleum UST System**" means an UST 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.

"**Pipe**" or "**Piping**" or "**Line**" means an impermeable hollow cylinder or tubular conduit constructed of non-earthen materials that conveys or transports Regulated Substances, or is used for venting, filling, or vapor recovery of Regulated Substances.

"**Pipeline Facility**" or "**Pipeline Facilities**" are new and existing Pipe rights-of-way and any associated equipment including Gathering Lines, facilities, or buildings.

"**Piping Run**" means all pressurized Piping from a single submersible turbine pump to the farthest dispenser or all Piping from a suction pump back to the Underground Storage Tank.

"**Positive Pressurized Delivery System**" means a Regulated Substance delivery system in which part or all of the system is continuously under pressure greater than the atmospheric pressure.

"**Precision Test**" means a test capable of detecting and quantifying Release rates with adjustments for variables in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

"**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.

"**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 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.

"**Public Well**" means a well which is used to supply water to more than three (3) dwelling units; twenty-five (25) or more employees; in the manufacture of ice, foods, or beverages; to the public in food washing, processing, or preparation in a plant, restaurant, or other facility.

"**RCRA**" means the Resource Conservation and Recovery Act of 1976 as amended.

"**Registration Certificate**" means a document issued by the Department to implement the registration and notification requirements of these Regulations.

"**Regulated Substance**" means a liquid that contains:

(a) Any substance defined in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601(14)) and any amendments thereto; but not including any substance regulated as a hazardous waste under RCRA Subtitle C; or

(b) Any volume of a carcinogen as defined by EPA in the Integrated Risk Information System (IRIS) April 2002 and as updated; or

(c) Petroleum, including crude oil or any fraction thereof, which is liquid at standard conditions of temperature (60 degrees Fahrenheit) and pressure (14.7 pounds per square inch absolute), including without limitation, petroleum and substances containing petroleum comprised of a complex blend of hydrocarbons such as Motor Fuels, Jet Fuels, distillate fuel oils, Motor Oil, Heating Fuel, residual fuel oils, lubricants, petroleum solvents, Used Oils, and biodiesel or other biologically derived fuels; or

(d) Alternative fuels such as ethanol and methanol, in concentrations up to one hundred percent (100%); or

(e) A substance determined by the Secretary through regulation to present a risk to public health or welfare or the environment if released into the environment.

(f) Any mixture of the foregoing a through e.

"**Release**" means any spilling, overfilling, leaking, emitting, discharging, escaping, leaching or disposing of a Regulated Substance into groundwater, surface water, air or soils.

"**Release Detection**" means a method or process of determining whether a Release of a Regulated Substance has occurred from the UST System into the environment or a leak has occurred into the interstitial space between the UST System and its secondary barrier or Secondary Containment around it.

"**Remedial Action**" means activities conducted to protect human health, safety, and the environment. These activities include evaluating risk, making no further action determinations, monitoring institutional and engineering controls, and designing and operating cleanup equipment.

"**Removal**" or "**Removed**" means the process of removing and disposing of an UST System, through the use of prescribed techniques for the purging of residues and vapors and removal of the vessel from the ground.

"**Repair"** means to restore to proper operating condition a Tank, Pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, Release Detection equipment or other UST System component that has caused a Release of product from the UST System or has failed to function properly.

"**Replacement**" or "**Replaced**" means

(a) For a Tank: to remove a Tank and install another Tank.

(b) For Piping: to remove fifty percent (50%) or more of Piping and install other Piping, excluding connectors, connected to a single Tank. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run.

"**Residential Tank**" is a Tank located on a single family property used primarily for dwelling purposes.

"**Responsible Party**" means any Person who:

(a) Owns or has a legal or equitable interest in a Facility or an UST;

(b) Operates or otherwise controls activities at a Facility;

(c) At the time of storage of Regulated Substances in an UST System, operated or otherwise controlled activities at the Facility or UST System, or owned or held a legal or equitable interest therein;

(d) Arranged for or agreed to the placement of an UST System by contract, agreement or otherwise;

(e) Caused or contributed to a Release from an UST System; or

(f) Caused a Release as a result of transfer of a Regulated Substance to or from an UST System.

"**Retrofit**" means to modify an UST System to meet standards contained in these Regulations.

"**Sacrificial Anode**" means a device to reduce or prevent corrosion of a metal in an electrolyte by galvanic coupling to a more anodic metal.

"**Secondary Containment**" or "**Secondarily Contained**" means a Release prevention and Release Detection system for a Tank or Piping. The system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes Containment sumps when used for interstitial monitoring or Piping.

"**Secretary**" means the Secretary of the Department of Natural Resources and Environmental Control or a duly authorized designee.

"**Security Interest**" means an interest in a Petroleum UST or UST System or in the Facility or property on which a Petroleum UST or UST System is located, created or established for the purpose of securing a loan or other obligation. Security Interests include mortgages, deeds of trusts, liens, and title pursuant to lease financing transactions. Security Interests may also arise from transactions such as sale and leasebacks, conditional sales, installment sales, trust receipt transactions, certain assignments, factoring agreements, accounts receivable financing arrangements, and consignments, if the transaction creates or establishes an interest in an UST or UST system or in the facility or property on which the UST or UST system is located, for the purpose of securing a loan or other obligation.

"**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 Septic Tank are pumped out periodically and hauled to a treatment facility.

"**Site Assessment**" means to measure for the presence of a Release where contamination is most likely to be present at an UST site. Selection of sample types, sample locations and measurement methods shall be based on the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment is not restricted to the property containing the UST System.

"**State**" means the State of Delaware.

"**Statistical Inventory Reconciliation**" or "**SIR**" means Release Detection methods based on the application of statistical principles to inventory data.

"**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.

"**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.

"**Substantial Governmental Relationship**" means the extent of a governmental relationship necessary under applicable state law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of an UST Release such as coterminous boundaries, overlapping constituencies, common groundwater aquifer, or other relationship other than monetary compensation that provides a motivation for the guarantor to provide a guarantee.

"**Surface Impoundment**" means 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.

"**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.

"**Tank**" means that portion of an Underground Storage Tank System that consists of the stationary structure constructed of Compatible materials designed to contain an accumulation of Regulated Substances and does not include any Connected Piping or Ancillary Equipment.

"**Termination**" in subsection 3.3, Form C and subsection 3.4, Form D of Part F 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 of the original policy.

"**UL**" means Underwriters Laboratories.

"**Under-Dispenser Containment**" or "**UDC**" means containment underneath a Dispenser System designed to prevent leaks from the Dispenser and Piping within or above the UDC from reaching soil or groundwater and to prevent seepage of liquids from the environment into the containment.

"**Underground Area**" means an underground room, such as a basement, cellar, shaft or vault, providing enough space to permit physical inspection of the entire UST situated on or above the surface of the floor.

"**Underground Storage Tank**" or "**UST**" means any one or combination of Tanks including underground Pipes connected thereto, which is used to contain an accumulation of Regulated Substances, and the volume of which, including the volume of underground Pipes connected thereto, is ten percent (10%) or more Beneath the Surface of the Ground. Such term does not include any:

(a) Septic Tank;

(b) Pipeline Facility (including Gathering Lines) which is regulated under:

(1) Chapter 601 of Title 49, or

(2) Which is an intrastate Pipeline Facility regulated under state laws as provided in Chapter 601 of Title 49, and which is determined by the Secretary of Transportation to be connected to a pipeline, or to be operated or intended to be capable of operating at pipeline pressure or as an integral part of a pipeline;

(c) Surface Impoundment, pit, pond, or lagoon;

(d) Storm Water or Wastewater Collection System;

(e) Flow-Through Process Tank;

(f) Liquid Trap or associated Gathering Lines directly related to oil or gas production and gathering operations; or

(g) Storage Tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage Tank is situated upon or above the surface of the floor.

(h) The term "Underground Storage Tank" or "UST" does not include any Pipes connected to any Tank which is described in subsections (a) through (g) of this definition.

"**Underground Storage Tank System**" or "**UST System**" means an Underground Storage Tank, connected underground product, vent, and vapor recovery Piping and its associated Ancillary Equipment, containment systems, and all appurtenances including Dispenser Systems, spill containment systems, overfill prevention systems, and Release Detection systems.

"**Upgrade**" means the addition of a component to improve the ability of an UST System to prevent or detect the Release of Regulated Substances from the UST System.

"**Used Oil**" means a petroleum based or synthetic oil used as an engine lubricant, engine oil, Motor Oil or lubricating oil for use in an internal combustion engine, or a lubricant for motor vehicle transmissions, gears or axles which through use, storage or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties.

"**Used Oil UST System**" means an UST System used for storing Used Oil and its associated Ancillary Equipment and containment system.

"**U-Tube**" means a Release Detection device placed under the longitudinal axis of an UST in an excavation which is always above the water table, and that can collect Regulated Substances released from an UST and can be inspected periodically to determine if a Release of a Regulated Substance has occurred.

"**Vadose Zone Vapor Detection Tube**" means a Release Detection device placed within the Tank field which does not reach the water table and can be continuously monitored by electronic means or periodically inspected for vapors emanating from released Regulated Substances.

"**Verifiable Service**" means a delivery system utilizing hand delivery by a State of Delaware Environmental Protection Officer or any mail delivery system whereby a signature of recipient and date of delivery is required.

"**Wastewater Treatment Tank**" means a stationary structure that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

3.0 Referenced Standards

3.1 Referenced Standards Organizations

3.1.1 The referenced standards listed in this Section have served in part as the basis for the standards enacted under these Regulations. The editions or versions of the referenced standards as noted in Part A, Section 3.0 of these Regulations are available for review and inspection with prior notification at the Department of Natural Resources and Environmental Control, Division of Waste and Hazardous Substances and from the following sources (addresses of the cited organizations are subject to change):

3.1.2 American Petroleum Institute (API), 1220 L Street, N.W., Washington, D.C. 20005, (202) 682-8375. http://www.api.org

3.1.3 ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19429-2959, (610) 832-9585. http://www.astm.org

3.1.4 National Association of Corrosion Engineers (NACE), P. O. Box 218340, Houston, Texas 77218, (713) 492-0535. http://www.nace.org

3.1.5 National Fire Protection Association (NFPA), Batterymarch Park, Quincy, MA 02269, (800) 344-3555. http://www.nfpa.org

3.1.6 National Leak Prevention Association (NLPA), 75-4 Main Street, Suite 300, Plymouth, NH 03264, (815) 301-2785. http://www.nlpa-online.org/index.html

3.1.7 Petroleum Equipment Institute (PEI), P. O. Box 2380, Tulsa, OK 74101, (918) 494-9696. http://www.pei.org

3.1.8 Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, Illinois 60047, (847) 438-8265. http://www.steeltank.com

3.1.9 Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062, (847) 272-8800. http://www.ul.com

3.1.10 U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA), Frances Perkins Building, 200 Constitution Avenue, NW, Washington, DC 20210, (866)-487-2365. http://www.osha.gov

3.2 Applicability

3.2.1 In these Regulations, all referenced standards mean the applicable edition or version as noted in Part A, Section 3.0 of these Regulations. Where there is an irreconcilable conflict between a standard or recommendation published by an industry or professional organization and referenced by these Regulations, and a requirement in these Regulations, the most stringent shall apply and control. Where there is an irreconcilable conflict between standards or recommendations published by industry or professional organizations and referenced by these Regulations, the most stringent shall apply and control.

3.3 Titles of Documents

3.3.1 American Petroleum Institute (API)

3.3.1.1 Specification Number 12F, *Shop Welded Tanks for Storage of Production Liquids*, 12th Edition, October 2008.

3.3.1.2 RP 1604, *Closure of Underground Petroleum Storage Tanks*, 3rd Edition, March 1996.

3.3.1.3 RP 1615, *Installation of Underground Petroleum Storage Systems*, 6th Edition, April 2011.

3.3.1.4 RP 1621, *Bulk Liquid Stock Control at Retail Outlets*, 5th Edition, May 1993.

3.3.1.5 RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks*, 5th Edition, June 2001.

3.3.1.6 RP 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*, 3rd Edition, January 1996.

3.3.1.7 RP 1635, *Management of Underground Petroleum Storage Systems at Marketing and Distribution Facilities* [final edition, now out of print], 3rd Edition, January 1987.

3.3.1.8 RP 1637, *Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals*, 3rd Edition, July 2006.

3.3.1.9 RP 1646, *Safe Work Practices for Contractors Working at Retail Petroleum/Convenience Facilities*, 2nd Edition, March 2017.

3.3.1.10 IP 1542, *Identification Markings for Dedicated Aviation Fuel Manufacturing and Distribution Facilities, Airport Storage and Mobile Fueling Equipment*, 8th Edition, August 2007.

3.3.1.11 RP 1626, *Storing and Handling Ethanol and Gasoline-ethanol Blends at Distribution Terminals and Service Stations*, 2nd Edition, August 2010.

3.3.1.12 Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*, 7th Edition, May 2014.

3.3.1.13 RP 2016, *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*, 1st Edition, August 2001.

3.3.1.14 RP 1626, *Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations*, 2nd Edition, August 2010.

3.3.1.15 RP 2200, *Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines*, 5th Edition, September 2015.

3.3.2 National Association of Corrosion Engineers (NACE)

3.3.2.1 NACE International Standard Practice SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, March 2011.*

3.3.2.2 NACE International Test Method TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,* March 2012.

3.3.2.3 NACE International Standard Practice SP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems*, October 2013.

3.3.2.4 NACE International Test Method TM0497, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems*, June 2012.

3.3.3 National Fire Protection Association (NFPA)

3.3.3.1 NFPA 30, *Flammable and Combustible Liquids Code*, May 2014.

3.3.3.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*, May 2014.

3.3.3.3 NFPA 31, *Standard for the Installation of Oil Burning Equipment*, December 2015.

3.3.3.4 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*, December 2014.

3.3.3.5 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*, August 2016.

3.3.4 National Leak Prevention Association (NLPA)

3.3.4.1 NLPA Standard 631, *Chapter A, Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks and Chapter B, Future Internal Inspection Requirements for Lined Tanks*, June 1995.

3.3.4.2 NLPA 631, *Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection*, June 1995.

3.3.5 Petroleum Equipment Institute (PEI)

3.3.5.1 RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems*, 2017 Edition.

3.3.5.2 RP300, *Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Fueling Sites*, 2009 Edition.

3.3.5.3 RP 500, *Recommended Practices for Inspection and Maintenance of Motor Fuel Dispensing Equipment*, 2011 Edition.

3.3.5.4 RP 900, *Recommended Practices for the Inspection and Maintenance of UST Systems*, 2017 Edition.

3.3.5.5 RP 1000, *Marina Fueling Systems*, 2014 Edition.

3.3.5.6 RP 1100, *Recommended Practices for the Storage and Dispensing of Diesel Exhaust Fluid*, 2015 Edition.

3.3.5.7 RP 1200, *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities*, 2017 Edition.

3.3.5.8 RP 1300, *Aviation Fueling Systems*, 2013 Edition.

3.3.5.9 RP 1400, *Fueling Systems for Emergency Generators, Stationary Diesel Engines and Oil Burner Systems*, 2014 Edition.

3.3.5.10 RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*, 2018 Edition.

3.3.6 Steel Tank Institute (STI)

3.3.6.1 Specification STI-P3®, *Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks*, November 2015.

3.3.6.2 F-841, *Standard for Dual Wall Underground Steel Storage Tanks*, January 2006.

3.3.6.3 F-894, ACT-100® *Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks*, November 2015.

3.3.6.4 F-961, ACT-100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks*, November 2015.

3.3.6.5 R-972, *Recommended Practice for the Addition of Supplemental Anodes to sti-P3® USTs*, December 2010.

3.3.6.6 F-922, *Specification for Permatank®*, October 2014.

3.3.6.7 R892, *Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems*, January 2006.

3.3.6.8 R012, *Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks*, April 2007.

3.3.6.9 R051, *Cathodic Protection Testing Procedures for STI- P3® USTs*, April 2017.

3.3.7 Underwriters Laboratories Standards (UL)

3.3.7.1 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids*, 9th Edition, January 1996.

3.3.7.2 UL 1316, *Standard for Glass-Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol Gasoline Mixtures*, 2nd Edition, January 1994.

3.3.7.3 UL 1746, *Standard for Safety: External Corrosion Protection Systems For Steel Underground Storage Tanks*, 3rd Edition, January 2007.

3.3.7.4 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids*, 1st Edition, October 1995.

3.3.7.5 UL 971A, *Outline of Investigation for Metallic Underground Fuel Pipe*, October 2006.

3.3.7.6 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas*, 10th Edition, May 2014.

3.3.8 U.S. Department of Labor, Occupational Safety and Health Administration (OSHA)

3.3.8.1 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*, September 2016.

3.3.8.2 OSHA, 29 CFR, 1926 Subpart P, *Excavations*, July 2015.

3.3.9 American Section of the International Association for Testing Materials (ASTM)

3.3.9.1 ASTM International E2893-16, *Standard Guide for Greener Cleanup*, May 2016.

3.3.10 Fiberglass Tank and Pipe Institute (FTPI)

3.3.10.1 FTPI Protocol, *Field Test Protocol for Testing and Annular Space of Installed Underground Fiberglass Double and Triple Wall Tanks with Dry Annular Space*, August 2014.

3.3.10.2 FTPI RP T-995-021, *Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks*, 2nd Edition, January 1995.

3.3.11 Interstate Technology and Regulatory Council (ITRC)

3.3.11.1 ITRC, *Green and Sustainable Remediation: State of the Science and Practice. GSR-1*, May 2011.

3.3.11.2 ITRC, *Green and Sustainable Remediation: A Practical Framework. GSR-2*, November 2011.

3.3.12 Ken Wilcox Associates (KWA)

3.3.12.1 KWA RP, *Recommended Practice for Inspecting Buried Lined Steel Tanks Using a Video Camera*, September 1999.

11 DE Reg. 922 (01/01/08)

23 DE Reg. 581 (01/01/20)

4.0 Registration and Notification Requirements

4.1 General Requirements

4.1.1 No Person shall own or operate an UST System unless the UST System is registered with the Department utilizing a form provided by the Department, unless specifically exempted in this Part. At a minimum, the notice shall specify to the extent known, the location, size, type of UST System, type of Release Detection, age of the UST, and the type of Regulated Substance(s) stored.

4.1.2 All UST Systems, unless specifically exempted, that were in the ground on or after July 12, 1985, unless taken out of operation and Closed In Place on or before January 1, 1974, are required to be registered with the Department in accordance with 7 **Del.C.** Chapter 74 utilizing a form provided by the Department. Owners and Operators who have not complied with the registration requirements may obtain a notification form from the Department which shall be accurately completed, signed, dated and returned to the Department.

4.1.3 Owners and Operators shall provide notification for each UST. Owners and Operators may provide notice for multiple USTs at a single Facility using one notification form. Owners with USTs located at more than one Facility shall file a separate notification form for each Facility.

4.1.4 Registration of UST Facilities shall be renewed on or before February 1 of every year from the date of the last valid Registration Certificate and until the Department receives a formal notice that the UST Facility has been Removed or Closed In Place or that the ownership of the Facility has been transferred. Registration shall be automatically renewed by the Department upon receipt of the annual Tank registration fee. Nonpayment of fees shall render the Registration Certificate invalid.

4.1.5 The Owner shall sign and date all UST registration submittals.

4.1.6 The Owner shall notify the Department in writing of any significant change in the information presented on the original registration form including change of address, change in UST System status including Removal, Closure In Place, Change In Service, or Change In Substance Stored, Retrofit, or Upgrade at least fourteen (14) Days prior to the change.

4.1.7 No Person shall accept delivery of a Regulated Substance into an UST System unless the UST Facility has a valid Registration Certificate issued by the Department.

4.1.8 No Person shall deposit a Regulated Substance into an UST System unless the UST Facility has a valid Registration Certificate issued by the Department.

4.1.9 Any Person who sells an UST System shall notify the new Owner and Operator of the UST System registration requirements of Part A, subsection 4.4.

4.2 Registration Fees

4.2.1 On or before February 1 of each calendar year, Owners and Operators of UST Systems shall pay an annual per Underground Storage Tank registration fee in accordance with 7 **Del.C.** §7418.

4.2.2 Consumptive Use Heating Fuel UST Systems are subject to the Tank registration fee in 7 **Del.C.** §7418 as follows:

4.2.2.1 Consumptive Use Heating Fuel UST Systems with a storage capacity greater than one thousand one hundred (1,100) gallons and less than or equal to two thousand (2,000) gallons are subject to the annual tank registration fee beginning January 1, 1989 and ending May 14, 1993.

4.2.2.2 Consumptive Use Heating Fuel UST Systems with a storage capacity greater than two thousand (2,000) gallons are subject to the annual tank registration fee beginning January 1, 1989.

4.2.3 No annual registration fee will be required if an UST System is Removed or Closed In Place prior to the February 1 deadline for payment of the UST fee. To qualify for this exemption, the Owner and Operator of the UST System shall comply with the notification and Removal or Closure In Place requirements of these Regulations.

4.3 Registration Certificate

4.3.1 The Department shall issue a valid Registration Certificate for each UST Facility upon initial registration or notification of Change In Service or change in ownership. The Owner and Operator of the UST Facility shall display a current and valid Registration Certificate on the premises of the UST Facility at all times. The Registration Certificate shall be made available for inspection upon request by any authorized local, state or federal representative.

4.4 Transfer of Ownership of UST Systems Notification Requirements

4.4.1 Any Person who sells a UST System intended to be used as an UST System shall notify the purchaser of such UST System of the new Owner's notification obligations under these Regulations.

4.4.2 Any Person who assumes ownership of an UST System from a previous registrant shall complete and return to the Department a new notification form and a transfer of ownership form with documentation of compliance with the financial responsibility requirements of Part F of these Regulations and a copy of the executed bill of sale for the property no later than thirty (30) Days after the transfer. The Owner and Operator may redact the sale price listed in the executed bill of sale.

4.4.3 The new Owner and Operator may operate the UST System for no more than 72 hours after assuming ownership without the Department having received the new notification form and a transfer of ownership form with documentation of compliance with the financial responsibility requirements of Part F of these Regulations and a copy of the executed bill of sale.

4.4.4 The seller or former Owner shall, at the time of transfer of ownership, deliver to the new Owner all available documents and information relevant to the UST System, as described in Part A, subsections 5.1.3 and 5.1.4.

4.4.5 Any change in the structure of the UST Owner, including any change in the corporate form and any change in the form of the business entity, shall constitute a transfer of ownership.

4.5 Multiple Use USTs Notification Requirements

4.5.1 Owners and Operators shall provide written notification to the Department when UST Systems are to be used for multiple purposes.

4.5.2 UST Systems storing one Regulated Substance utilized for multiple purposes including petroleum used for heating buildings and fueling emergency generators and diesel fuel used for fueling vehicles and heating buildings, shall meet the more stringent requirements for installation, Release Detection, spill and overfill prevention, corrosion protection and financial responsibility requirements in Parts A, B, C, D and F of these Regulations.

4.6 Installation Notification Requirements

4.6.1 No Person shall install an UST System used for storing Regulated Substances without prior written approval from the Department.

4.6.2 UST System Owners and Operators shall notify the Department of the planned installation of all UST Systems used for storing Regulated Substances, at least thirty (30) Days prior to installation. Notice shall include information as required in Parts B, C or D of these Regulations.

4.6.3 Upon notification by the Owner and Operator, a review by the Department of the notification and accompanying documents shall be made for compliance with these Regulations.

4.6.4 A formal letter of approval or denial of the installation shall be issued by the Department to the Owner.

4.6.5 The Owner and Operator shall comply with all requirements stated by the Department in the installation approval letter.

4.6.6 If within the thirty (30) Day notification period, the Department or its designee issues a formal letter of approval, the installation of the UST System may begin.

4.6.7 If a denial is issued, the Plan may be re-submitted provided all corrections required by the Department have been made.

4.6.8 During construction, an Owner or Operator shall not cause or allow a design change which is not in accordance with the approved plans and all terms and conditions of the Department's approval.

4.6.9 A formal approval of installation shall be valid for one year from the date of approval. If installation of the UST System is not completed within one year of issuance of the Department's letter of approval, the approval shall lapse.

4.6.10 Department approval for installation of an UST System shall not eliminate the need to obtain applicable approvals and permits from the authority(ies) enforcing the *Delaware Fire Prevention Commission Regulations*, local building codes or other State or Federal or Local rules or regulations.

4.6.11 Owners and Operators shall certify that they are in compliance with the financial responsibility requirements in Part F of these Regulations prior to a Regulated Substance being placed in the UST system. If an insurance or risk retention group coverage mechanism is used to comply with the financial responsibility requirements in Part F, such certification requires submission of an insurance or risk retention group coverage documents, including a copy of the complete insurance policy and any endorsements, and the Certificate Of Insurance (Form D) and UST Schedule (Form R).

4.6.12 At the completion of the UST System installation, the Owner and Operator shall not commence operation of the UST System without written approval and receipt of a valid Registration Certificate from the Department.

4.7 Repair, Retrofit and Upgrade Notification Requirements

4.7.1 UST Systems Owners and Operators shall notify the Department on a form provided by the Department, of scheduled Repairs, Retrofits, or Upgrades that require post-construction testing in accordance with Part B, subsection 1.28.7 or Part B, subsection 2.29.7, at least fourteen (14) Days prior to the proposed date of construction. The Department shall approve or deny the construction work within fourteen (14) Days of receipt of the notification form and construction plans.

4.7.2 UST Systems Owners and Operators shall notify the Department on a form provided by the Department, of scheduled Repairs, Retrofits, or Upgrades that require Site Assessment in accordance with Part B, subsection 1.28.11 or Part B, subsection 2.29.11, at least fourteen (14) Days prior to the proposed date of construction. The Department shall approve or deny the construction work within fourteen (14) Days of receipt of the notification form and construction plans.

4.7.3 The Repair, Retrofit or Upgrade construction may proceed after the Department has acknowledged receipt of the notification form and has approved the Repair, Retrofit or Upgrade construction plans.

4.7.3.1 If the Repair, Retrofit, or Upgrade is aboveground or within a Containment Sump and the Owner or Operator does not receive approval from the Department within fourteen (14) Days, the Owner or Operator may commence construction work for Repair, Retrofit, or Upgrade provided that:

4.7.3.1.1 The Owner or Operator notifies the Department two (2) Days prior to the commencement of Repair, Retrofit or Upgrade construction work; and

4.7.3.1.2 The Owner or Operator shall recognize that any actions taken without prior approval is at the risk of the Owner or Operator and does not absolve the Owner or Operator of the obligation to comply with all applicable requirements of the Regulations.

4.7.4 UST System Owners and Operators shall notify the Department two (2) Days prior to the commencement of Repair, Retrofit or Upgrade construction work after receipt of the Department's approval of the Repair, Retrofit or Upgrade construction plans unless otherwise directed by the Department.

4.7.5 If the Repair, Retrofit or Upgrade construction work has not begun within ninety (90) Days of receipt of the Department's approval, a new notification form shall be submitted to the Department.

4.8 Removal, Closure In Place, Change In Service and Change in Substance Stored Notification Requirements

4.8.1 UST System Owners and Operators shall notify the Department of all scheduled UST System Removals, UST System Closures In Place, UST System Changes In Service, or UST Changes in Substance Stored on a form provided by the Department. The notification form shall be completed and signed by the Owner and shall be received by the Department at least fourteen (14) Days prior to beginning the Removal, Closure In Place, Change In Service or Change in Substance Stored of the UST System.

4.8.2 Removal, Closure In Place, Change In Service or Change in Substance Stored of an UST System without the required fourteen (14) Day notification to the Department is prohibited. If such action is in response to an Imminent Threat to human health, safety or the environment, the Owner or Operator shall notify the Department in accordance with Part E, subsection 1.3.

4.9 Posting of Approval Letters and Change in Schedule of Construction

4.9.1 A copy of all Department approvals and permits shall be kept at the UST site and be available to Department representatives upon request. UST installation, Retrofit or Upgrade work may be halted for failure to maintain a copy of approvals and permits at the construction site.

4.9.2 Any change in the schedule of work shall be communicated to the Department a minimum of two (2) Days prior to the new scheduled date of work. All schedule changes shall be approved by the Department.

4.10 UST System Tightness Test Failure Reporting Requirements

4.10.1 Results of any UST System which fails an UST System tightness test shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

4.10.2 The Department reserves the right to request confirmatory system tightness tests to verify any test results submitted by an Owner, Operator, or contractor.

23 DE Reg. 581 (01/01/20)

5.0 Recordkeeping

5.1 General Requirements

5.1.1 Owners and Operators of UST System Facilities shall maintain records in an orderly permanent form. To demonstrate recent UST Facility compliance status, Owners and Operators shall maintain records of monitoring, testing, Repairs, Retrofits, Upgrades, Removal, or Closure In Place, Change In Service or Change in Substance Stored.

5.1.2 Owners and Operators of UST System Facilities shall make all records available for inspection upon request by the Department within fourteen (14) Days of the request.

5.1.3 Owners and Operators shall maintain the following UST System operation and Maintenance records for a period of not less than three (3) years as applicable:

5.1.3.1 Inventory control records;

5.1.3.2 Tank and Piping Release Detection records;

5.1.3.3 Routine inspection records;

5.1.3.4 Containment Sump testing records;

5.1.3.5 Manual Tank gauging records;

5.1.3.6 Overfill prevention equipment inspection records.

5.1.4 Owners and Operators shall maintain the following records throughout their time of ownership or operation of the UST system. These records are meant to be permanent records maintained for the life of the UST system and transferred from one Owner to the next pursuant to Part A, subsection 4.4.

5.1.4.1 Cathodic Protection records;

5.1.4.2 Tank lining records;

5.1.4.3 UST registration forms and certificates;

5.1.4.4 Regulated Substance storage records including demonstration of Compatibility with the UST system in accordance with Part A, Section 13.0;

5.1.4.5 Dates and details of the UST System installation, including:

5.1.4.5.1 As built plans drawn to a specified scale of the UST and Piping Systems; and

5.1.4.5.2 Photos taken during the installation; and

5.1.4.5.3 New installation approval letters issued by the Department.

5.1.4.6 Dates and details of installation of Release Detection systems. These records shall include the following:

5.1.4.6.1 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.

5.1.4.6.2 Written documentation of all calibration, Maintenance, and Repair of Release Detection equipment located on site.

5.1.4.7 Records of, dates, descriptions, and written documentation of Repairs, Retrofits and Upgrades of the UST Systems and associated Ancillary Equipment including soil and groundwater sampling and laboratory chemical analyses reports.

5.1.4.8 UST System Removal and Closed In Place Records.

5.1.4.9 Results of the Site Assessment conducted at each site for the purpose of demonstrating compliance with investigation requirements of Part E of these Regulations.

5.1.4.10 No further action letters issued by the Department.

5.1.4.11 Class A, Class B and Class C Operator Training Records for duration of employment.

5.1.4.12 Any records concerning an alternative procedures approval issued by the Department.

5.1.4.13 Financial responsibility documentation in accordance with Part F.

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6.0 Alternative Procedures Approval Requirements

6.1 General Requirements

6.1.1 Alternative procedures approval may be granted by the Department from these Regulations except that no alternative procedure shall be granted which would be inconsistent with the no less stringent requirements of Subtitle I, Section 9004 of the Resource Conservation and Recovery Act of 1976 and the applicable provisions of 40 CFR Part 281 Subpart C.

6.1.2 The Owner and Operator of an UST System subject to the provisions of these Regulations may request in writing a determination from the Department for approval of an alternative procedure or technology. The Department may approve alternative procedures or technologies or a combination of alternative procedures or technologies if the following requirements are met. The requirements shall be submitted in writing and shall set forth as a minimum the following information:

6.1.2.1 Name and location of the Facility and the specific UST System for which an alternative procedure is sought; and

6.1.2.2 The specific provision of the Regulations for which an alternative procedure is sought; and

6.1.2.3 The contents of the UST System; and

6.1.2.4 The basis for the alternative procedure, including the technical difficulties that would result from compliance with the established provision; and

6.1.2.5 The alternative procedure or technology for which approval is sought; and

6.1.2.6 Documentation that demonstrates that the alternative procedure or technology meets or exceeds the performance standard for approved technologies and that the alternative procedure or technology offers a no less stringent degree of protection for human health, safety or the environment as would the requirements specifically established in these Regulations.

6.1.3 The Department will provide a written response to all requests for alternative technology approvals. The request may be denied, approved or approved with conditions. If the technology or procedure or a combination of technologies or procedures is approved, the Owner and Operator shall comply with any conditions imposed by the Department on its use to ensure the protection of human health, safety or the environment.

6.1.4 In the case of a denial of a request under this Section the Department will respond to the request stating the justification for the denial.

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7.0 Information Access

7.1 General Requirements

7.1.1 For the purpose of developing or assisting in the development of a standard regulation or enforcement of these Regulations, an Owner or Operator shall, upon the request of a duly designated officer or employee of the State designated by the Secretary of the Department, furnish information relating to the UST System and its contents and shall permit the designated officer or employee at all reasonable times to have access to and to copy all records relating to the UST System or its contents and to conduct monitoring or require remediation activities, pursuant to 7 **Del.C.** Chapter 74, *The Delaware Underground Storage Tank Act,* which the designated officer or employee deems necessary. For the purpose of developing or assisting in the development of a standard or regulation or enforcement of these Regulations, the designated officer or employee is authorized to:

7.1.1.1 Enter at reasonable times the Facility or other place where an UST or its records are located. The Owner and Operator shall permit unannounced inspections of UST Systems pursuant to these Regulations; and

7.1.1.2 Inspect and obtain samples of Regulated Substances from any Person and to conduct monitoring of the UST System, contents, or surrounding soils, water, and air. An inspection shall be commenced and completed with reasonable promptness.

7.1.2 In submitting data under 7 **Del.C.** Chapter 74, *The Delaware Underground Storage Tank Act*, and these Regulations, a Person required to provide such data may:

7.1.2.1 Designate the data which the Person believes is entitled to protection as business or corporate property; and

7.1.2.2 Submit such designated data separately from other data submitted under these Regulations.

7.1.3 Any such records, reports or information obtained shall be entitled to protection under United States Code Title 18 §1905, *Disclosure of Confidential Information Generally*.

7.1.4 Any information submitted to the Department in which a confidential business information designation is requested shall be subject to Part A, Section 8.0 of these Regulations and the *Freedom of Information Act Regulations* adopted pursuant to 29 **Del.C.** Chapter 100 as amended.

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8.0 Submittal of Confidential Information

8.1 General Requirements

8.1.1 Any claim of confidentiality as to the name and address of applicants on any registration or notification forms will be denied.

8.1.2 A business confidentiality claim shall be asserted at the time of submission of the information or at the first opportunity provided, and shall be asserted by a Person claiming confidentiality, or the Department may release the information without further notice to the Person. Business information is entitled to confidential treatment if:

8.1.2.1 The business has asserted a business confidentiality claim which has not expired by its terms, nor been waived nor withdrawn; and

8.1.2.2 The business has satisfactorily shown that it has taken reasonable measures to protect the confidentiality of the information and that it intends to continue to take such measures; and

8.1.2.3 The information is not, nor has been, reasonably obtainable without the business' consent by other Persons (other than governmental bodies) by the use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding); and

8.1.2.4 No statute specifically requires disclosure of the information; and

8.1.2.5 The business has satisfactorily shown that disclosure is likely to cause substantial harm to its competitive position or the information is voluntarily submitted and its disclosure would likely impair the Department's ability to obtain necessary information in the future.

8.1.3 Any information to which this Section applies, which may be entitled to confidential treatment as determined by the Department, may be released upon request to the United States Environmental Protection Agency (EPA).

8.1.4 Any information submitted to the Department in which a confidential business information designation is requested shall be subject to the *Freedom of Information Act Regulations* adopted pursuant to 29 **Del.C.** Chapter 100 as amended.

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9.0 Delivery and Dispensing Prohibitions

9.1 Delivering and Dispensing Prohibition Tags

9.1.1 "Delivery Prohibition Tag" shall mean a tamper resistant tag, 4.5 inches x 7.5 inches, colored red, which shall include without limitation the following wording, printed in white, in all capital letters, in at least 36 point bold-faced type:

9.1.1.1 "PETROLEUM DELIVERY PROHIBITED"; and

9.1.1.2 "No Person shall remove, deface, alter or otherwise tamper with this Delivery Prohibition Tag so that any information contained on it becomes illegible or otherwise is rendered unavailable to any Person considering or commencing delivery of Regulated Substance into the UST System.

9.1.1.3 This Delivery Prohibition Tag is affixed by the Delaware Department of Natural Resources and Environmental Control, pursuant to Part A, Section 9.0. Violators are subject to civil and criminal penalties pursuant to 7 **Del.C.** §§6005, 6013 and 7411." Contact information for the Department shall be included on the Delivery Prohibition Tag.

9.1.1.4 No Person shall order, deliver or accept delivery of a Regulated Substance into an UST System that has a Delivery Prohibition Tag affixed to the UST System.

9.1.2 “Dispensing Prohibition Tag" shall mean a tamper resistant tag, 4.5 inches x 7.5 inches, colored white, which shall include without limitation the following wording, printed in red, in all capital letters, in at least 36 point bold-faced type:

9.1.2.1 "PETROLEUM DISPENSING PROHIBITED"; and

9.1.2.2 "No Person shall remove, deface, alter or otherwise tamper with this Dispensing Prohibition Tag so that any information contained on it becomes illegible or otherwise is rendered unavailable to any Person considering dispensing of Regulated Substance from the UST System.

9.1.2.3 This Dispensing Prohibition Tag is affixed by the Delaware Department of Natural Resources and Environmental Control, pursuant to Part A, Section 9.0. Violators are subject to civil and criminal

penalties pursuant to 7 **Del.C.** §§6005, 6013 and 7411. Contact information for the Department shall be included on the Dispensing Prohibition Tag.

9.1.2.4 No Person shall dispense a Regulated Substance from a UST System that has a Dispensing Prohibition Tag affixed to the UST System.

9.1.3 The Department shall retain all other legal rights and remedies for violations upon which a Delivery or Dispensing Prohibition Tag is based, including without limitation all civil, administrative and daily monetary penalties. Affixing of the Delivery or Dispensing Prohibition Tag shall not be construed to preclude, estop or otherwise limit the exercise at any time of any right or remedy by the Department, including without limitation all civil, administrative and daily penalties. Due to the nature of the Delivery or Dispensing Prohibition Tag, an Owner and Operator should expect that additional enforcement action may be taken.

9.1.4 Any failure of the Division to take any action specified in Part A, Requirements for Delivery or Dispensing Prohibition, subsection 9.1, shall not be a condition on the effectiveness of the Delivery or Dispensing Prohibition Tag to prevent deliveries or dispensing under penalty of law, and shall not constitute a defense to any violations under the *Regulations Governing Underground Storage Tank Systems* or 7 **Del.C.** Chs. 60 and 74.

9.2 Process for Field Delivery and Dispensing Prohibitions Without Prior Notice

9.2.1 The following conditions warrant immediate Delivery and Dispensing Prohibitions:

9.2.1.1 Department representative determines that an Imminent Threat exists, or

9.2.1.2 Spill prevention, overfill prevention, Release Detection, or corrosion protection equipment is not installed as required by these Regulations, or

9.2.1.3 Failure to comply with an Indicated Release investigation or Release response requirements in accordance with Part E of these Regulations, or

9.2.1.4 Failure to comply with financial responsibility requirements in accordance with Part F of these Regulations.

9.2.2 Department representative shall immediately affix the Delivery Prohibition Tag to the fill Pipe and the Dispensing Prohibition Tag to the affected Dispenser of the UST System(s) involved, so that it is immediately noticeable and available to any Person considering or commencing delivery of Regulated Substances into the UST System or dispensing of Regulated Substances from the UST System(s).

9.2.3 Department representative shall contact the Owner and Operator, as soon as practicable subsequent to the affixing of the Delivery and Dispensing Prohibition Tags and inform the Owner and Operator of:

9.2.3.1 The affixing of the Prohibition Tags, and

9.2.3.2 The violation(s) upon which the prohibition is based and

9.2.3.3 Procedures for filing a Notice of Appeal.

9.2.4 An Owner or Operator may at any time submit a written Notice of Appeal, disputing the underlying violation(s) to the Department. The Notice of Appeal shall provide all information, substantiation, and documentation to allow an informed decision on the appeal, and contact information.

9.2.5 The Department shall issue a written response to the Notice of Appeal within seven (7) Days of receipt, and shall arrange for it to be delivered to the Owner or Operator submitting the Notice of Appeal as soon as practicable. An Owner or Operator may submit more than one written Notice of Appeal.

9.2.6 Within seven (7) Days of receipt by an Owner or Operator of the Department's written response, the Owner or Operator may submit a Request for an Expedited Evidentiary Hearing to the Department.

9.2.7 Within seven (7) Days of receipt of the Request for an Expedited Evidentiary Hearing, the Department shall schedule an Expedited Evidentiary Hearing, with written notice to the Owner or Operator at least thirty (30) Days before the scheduled date of the Expedited Evidentiary Hearing.

9.2.8 At any time information becomes available to the Department that causes it to conclude that the violation(s) upon which the Delivery and Dispensing Prohibition Tags is based no longer exists, including results from the Indicated Release investigation, Department representative shall remove the Delivery or Dispensing Prohibition Tag as soon as practicable.

9.3 Process for Delivery Prohibitions with Prior Notice

9.3.1 Upon determination by the Department of a violation of the *Regulations Governing Underground Storage Tank Systems* or 7 **Del.C.** Chs. 60 or 74, other than a violation that poses an Imminent Threat, the Department may give written notice to the Owner or Operator of the following:

9.3.1.1 The violation(s) upon which the prohibition is based, and

9.3.1.2 The scheduling of an Expedited Evidentiary Hearing, with written notice to the Owner or Operator at least thirty (30) Days before the scheduled date of the Expedited Evidentiary Hearing, and

9.3.1.3 The preliminary intention to affix a Delivery Prohibition Tag at the conclusion of the Expedited Evidentiary Hearing, subject to consideration of the evidence submitted and any other pertinent considerations.

9.4 Process for Expedited Evidentiary Hearing

9.4.1 The administrative head of the Department, or his or her designee, shall preside at the Expedited Evidentiary Hearing.

9.4.2 The Owner or Operator may appear at the Expedited Evidentiary Hearing and submit evidence to refute or correct the violation(s).

9.4.3 The administrative head of the Department, or his or her designee, shall issue a written ruling to the Owner or Operator within seven (7) Days after the Expedited Evidentiary Hearing is concluded.

9.4.4 The Owner or Operator may appeal an adverse determination from the Expedited Evidentiary Hearing by requesting a public hearing pursuant to the procedural provisions for a public hearing found in 7 **Del.C.** Chs. 60 and 74. The request for a public hearing shall be made by the Owner or Operator to the Secretary's Office in writing within thirty (30) Days of receipt of an adverse determination of the Expedited Evidentiary Hearing.

9.4.5 The focus of the appeal process shall be the existence of the violation(s) underlying the affixing of the Delivery or Dispensing Prohibition Tag, and, by extension, whether the Department should remove the Delivery or Dispensing Prohibition Tag or forbear from affixing it. If at any time during the appeal process, the Division removes the Delivery or Dispensing Prohibition Tag, the appeal process shall be ceased, no further actions need be taken by the Department, and no further proceedings shall be available or provided to the Owner or Operator concerning the Delivery or Dispensing Prohibition Tag. The appeal process shall not act as a stay of the effect of the Delivery or Dispensing Prohibition Tag or any other legal requirements.

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10.0 Requirements for Operator Training

10.1 Requirements for Class A, Class B and Class C Operators

10.1.1 Owners and Operators shall submit to the Department on a form provided by the Department a list of the individuals designated as the Class A and Class B Operator for each UST System that is subject to the requirements of Part B, or Part C with the exception of Heating Fuels UST Systems used for single family residential heating purposes, or Part D, or Part H or Part I of these Regulations, and that is In Service or Out Of Service, or has not been Removed or Closed in Place in accordance with these Regulations. The list shall include the name of the operator(s), classification of the operator(s), date each operator assumed the responsibility for their classification and date the operator training or written assessment was successfully completed.

10.1.2 A list in accordance with the requirements of Part A, subsection 10.1.1 shall be submitted to the Department a minimum of fourteen (14) Days prior to the operation of an UST System.

10.1.3 Owners and Operators shall notify the Department in writing within fourteen (14) Days of any change in the information provided in Part A, subsection 10.1.1.

10.1.4 At least one Class A and one Class B Operator shall be designated for each Facility. An individual may be designated as a Class A, Class B, or Class C Operator or any combination of the three (3) classes at a single Facility.

10.1.5 An individual may be designated as a Class A, Class B, or Class C Operator at more than one Facility.

10.1.6 A Facility shall not operate after August 8, 2012 unless a Class A, Class B, and Class C Operator has been designated for each UST System and Class A and Class B Operators have successfully completed a Department approved training program (receiving a grade of eighty percent (80%) or higher) and Class C Operators have been trained in accordance with Part A, subsection 10.1.11. At a minimum, the training program shall evaluate Class A and Class B Operators to determine these individuals have the knowledge and skills to make informed decisions regarding compliance and determine whether appropriate individuals are fulfilling the operation, Maintenance, and recordkeeping requirements for UST Systems in accordance with Part A, subsection 10.1.10.

10.1.7 Individuals designated as a Class A or Class B Operator in another state may comply with the training requirements of Part A, subsection 10.1.6 by successfully completing and receiving a grade of eighty percent (80%) or higher on an online assessment approved by the Department.

10.1.8 Individuals assuming responsibility for the duties of a Class A or Class B Operator shall successfully complete Department approved training in the topics listed in Part A, subsection 10.1.10 within thirty (30) Days of being designated as the Class A or Class B Operator.

10.1.9 In addition to successful completion of an initial training program as required in Part A, subsection 10.1.6, upon notification from the Department that an UST System is not in compliance with these Regulations, Owners and Operators shall ensure that the Class A and Class B Operators at the Facility successfully complete additional training as required within thirty (30) Days of receipt of written notice unless otherwise directed by the Department.

10.1.10 Training for Class A and Class B Operators shall be provided to ensure that the UST System is operated in compliance with these Regulations and shall include but is not limited to the following topics as applicable:

10.1.10.1 Registration and Notification Requirements; and

10.1.10.2 Operation and Maintenance of UST System components; and

10.1.10.3 Operation and Maintenance of spill prevention systems; and

10.1.10.4 Operation and Maintenance of overfill prevention systems; and

10.1.10.5 Operation and Maintenance of Release Detection systems; and

10.1.10.6 Operation and Maintenance of corrosion protection systems; and

10.1.10.7 Emergency response procedures; and

10.1.10.8 Compatibility of Regulated Substances and UST Systems; and

10.1.10.9 Financial responsibility requirements; and

10.1.10.10 Reporting, recordkeeping, testing, and routine inspection requirements; and

10.1.10.11 Release and indicated Release reporting requirements; and

10.1.10.12 Class C Operator training requirements; and

10.1.10.13 Operation and maintenance of vapor recovery systems; and

10.1.10.14 Change In Service, Removal, Retrofit, Closure in Place requirements; and

10.1.10.15 Materials of UST Systems.

10.1.11 Owners and Operators shall ensure that all Class C Operators are trained in emergency response procedures specific to the Facility prior to assuming Class C Operator responsibilities. Owners and Operators shall maintain a list of currently trained and active Class C Operators specific to the Facility.

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11.0 Use of Certified Contractors

The installation, Retrofit, Removal or Closure In Place of an UST System storing Regulated Substance shall have a minimum of one individual, certified for the UST System activity to be performed, present at all times while work is occurring. This individual shall be a permanent employee of the business firm performing the UST System activity and the business firm shall be certified for the UST System activity being performed in accordance with the requirements of Part G of these Regulations. All work performed on an UST System storing Regulated Substance shall be in accordance with the requirements of Parts A, B, C, D, E, G, H and I of these Regulations.

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12.0 Request for No Further Action Determination

An Owner or Operator who seeks a no further action determination from the Department for the Removal or Closure In Place of any UST System shall be subject to the requirements of Part A, Section 11.0, Part B, Section 4.0, Part C, Section 4.0, Part D, Section 3.0, Part E, Section 6.0, Part H, subsection 2.5 and Part I, subsection 2.5 as applicable.

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13.0 Additional Compatibility requirements for Regulated Substances Containing Ethanol and Biodiesel

13.1 Owners and Operators shall use an UST System made of or lined with materials that are Compatible with the Regulated Substance stored in the UST System.

13.2 Owners and Operators shall follow the notification requirements of Part A, Section 4.0 prior to changing to a Regulated Substance containing greater than ten (10) percent ethanol, greater than twenty (20) percent biodiesel, or any other Regulated Substance identified by the Department. In addition, Owners and Operators with UST Systems storing these Regulated Substances shall meet one of the following:

13.2.1 Demonstrate Compatibility of the UST System (including the Tank, Piping, Containment Sumps, pumping equipment, Release Detection equipment, spill equipment, and overfill equipment). Owners and Operators shall demonstrate Compatibility of the UST System using one of the following:

13.2.1.1 Certification or listing of UST System equipment or components by a nationally recognized, independent testing laboratory for use with the Regulated Substance stored; or

13.2.1.2 Equipment or component manufacturer's approval which shall be in writing, indicate an affirmative statement of Compatibility and specify the range of biofuel blends the equipment or component is Compatible with; or

13.2.1.3 Other method or methods determined by the Department to be no less protective of human health and the environment than the options listed in Part A, subsection 13.2.1.1 or 13.2.1.2.

13.3 Owners and Operators shall maintain records of Compatibility in accordance with Part A, subsection 5.1.4.

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14.0 Conditions Required for Product Piping Slope Exemption

14.1 Owners and Operators who seek a UST System installation that will not meet one-eighth (1/8) inch per foot slope requirements in accordance with Part B, subsection 1.14.3, the following additional conditions shall be met:

14.1.1 Product piping shall be a pressurized system;

14.1.2 All Containment Sumps shall have a functioning sump sensor, programmed for positive shut down of the UST System or the product piping interstice shall be under continuous vacuum monitoring and the UST System shall be programmed for positive shut-down;

14.1.3 The dispenser product piping sump jumper tubes shall be removed or the product piping test boots pulled back after testing to allow the interstice to be open to the sump sensors (Not applicable if continuous vacuum monitoring is implemented);

14.1.4 Annual line leak detector function testing shall include measurements of resiliency and bleedback;

14.1.5 Annual line tightness testing shall be conducted on the piping, primary and secondary, while the system is in operation or a continuous vacuum monitoring of the interstice performing continuous interstitial monitoring of the piping system is required;

14.1.6 Continuous interstitial monitoring of the secondary product piping shall be the method of monthly release detection for the product piping system;

14.1.7 Product piping from the dispenser sump closest to the UST System submersible turbine pump sump shall be sloped at a minimum of one-eighth (1/8) inch per lateral foot. Product piping installed with negative slope toward dispenser sumps is prohibited.

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Part B: Requirements for Installation, Operation and Maintenance of Underground Storage Tank Systems Storing Regulated Substance Excluding Consumptive Use Heating Fuel UST Systems or Hazardous Substance UST Systems

1.0 Installation, Operation and Maintenance Requirements For UST Systems Storing Regulated Substance Excluding Consumptive Use Heating Fuel or Hazardous Substance Installed on or After January 11, 2008

1.1 General Requirements for UST Systems Storing Regulated Substance Excluding Consumptive Use Heating Fuel or Hazardous Substance

1.1.1 Owners and Operators shall ensure that all UST Systems storing Regulated Substances shall be designed, constructed, installed and operated in accordance with manufacturer's specifications, and accepted engineering practices and procedures; and in a manner which will prevent Releases of Regulated Substances to the ground waters, surface waters or soils of the State due to corrosion, structural failure, manufacturing defects, and spills and overfills for the Operational Life of the UST System.

1.1.2 The material used in the construction and lining of the UST System shall be Compatible with the substances to be stored in the UST System.

1.1.3 Components of the UST System shall be approved by Underwriters Laboratories or equivalent third party certified.

1.1.4 All UST Systems installed on or after January 11, 2008 shall be designed and installed in accordance with the Secondary Containment requirements in accordance with Part B, subsection 1.4.

1.1.5 Bare steel UST Systems or steel UST Systems coated with asphalt are prohibited.

1.1.6 Owners and Operators shall install, operate and maintain all equipment such that manufacturer's warranties are not voided.

1.1.7 Regulated Substance shall not be deposited into an UST System that is not in compliance with the financial responsibility requirements of Part F of these Regulations.

1.1.8 Dispenser hoses shall be a maximum of eighteen (18) feet in length unless otherwise approved by the Department. When not in use, hoses shall be reeled, racked or otherwise protected from damage.

1.1.9 All product shear valves shall annually be manually opened and loosened to prevent gum deposit build-up and other conditions that may affect the operation of the valve.

1.2 General Installation Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.2.1 Prior to the installation of any UST System a site survey shall be initiated by the Facility Owner and Operator. The pre installation site survey shall be conducted to determine the locations of nearby buildings, underground utilities and sewer lines.

1.2.2 Private and public drinking water wells, rivers, streams, lakes, canals, wetlands, floodplains, State-designated Natural Areas, and other environmentally sensitive locations shall be recorded and incorporated into the design of the UST System Facility.

1.2.3 UST System Owners and Operators shall notify the Department at least thirty (30) Days prior to installation of all UST Systems. Notice shall include a site plan, the scale of which shall be one (1) inch equals ten (10) feet or less, and which shall at a minimum include the following:

1.2.3.1 The information determined from the pre-installation site survey in Part B, subsection 1.2.1; and

1.2.3.2 Size and location of Tanks including Tank dimensions, depth of cover, Empty Tank weight, Tank manufacturer and Tank type; and

1.2.3.3 The UST System installation location, streets, roads, other properties bordering the construction site; and

1.2.3.4 Piping dimensions and layout; and

1.2.3.5 Dimensions and locations of vents; and

1.2.3.6 Type of Regulated Substance to be stored; and

1.2.3.7 Location of dispensers; and

1.2.3.8 Location of overfill device, spill prevention system and monitoring devices including dimensions of spill containment devices and sumps when applicable; and

1.2.3.9 Materials of construction for Tank(s), Piping and associated appurtenances, including manufacturer name, model numbers and any manufacturer’s catalog information requested by the Department; and

1.2.3.10 Location of and access to check valves, antisiphon valves, automatic Line leak detectors, and flexible connectors; and

1.2.3.11 Location of Cathodic Protection components and test stations; and

1.2.3.12 Location of utilities (both above and underground); and

1.2.3.13 Location of electrical service components; and

1.2.3.14 Details and dimensions of anchoring method including hold down pads, cover pads or deadmen and electrical isolation methods associated with the anchoring system if applicable. Indicate on plan if area is subject to vehicle traffic; and

1.2.3.15 Map with the distance clearly labeled in feet from the UST System to all Domestic and Industrial Wells and surface water bodies within a one hundred and fifty feet (150) radius of the UST System.

1.2.4 After January 11, 2008, new UST Systems shall not be installed within a minimum distance of a one hundred and fifty (150) foot radius from a Public or Industrial Well, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part B, subsection 1.2.4.

1.2.5 After January 11, 2008, new UST Systems shall not be installed within a minimum distance of a one hundred (100) foot radius from a Domestic Well, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part B, subsection 1.2.5.

1.3 UST System Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.3.1 Acceptable designs for UST System construction include:

1.3.1.1 Secondarily Contained Cathodically Protected steel (STi-P3); or

1.3.1.2 Secondarily Contained fiberglass reinforced plastic; or

1.3.1.3 Secondarily Contained steel with non-metallic or coated outer shell.

1.3.2 UST Systems shall be installed in accordance with these Regulations, the manufacturer's specifications, accepted engineering practices and the following industry standards:

1.3.2.1 PEI RP100, *Recommended Practices For Installation Of Underground Liquid Storage Systems*.

1.3.2.2 NFPA 30, *Flammable and Combustible Liquids Code*.

1.3.2.3 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.3.2.4 OSHA, 29 CFR, 1926 Subpart P, *Excavations*.

1.3.3 All Tanks shall be equipped with a strike plate located beneath all Tank openings.

1.4 Secondary Containment Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.4.1 The Department shall require Secondary Containment on any portion of the UST System where aquifers underlying the UST Facility are determined to need such protection, or where groundwater below the UST Facility is within a well head protection area, or where groundwater is susceptible to contamination in order to protect the safety, health, welfare, and environment of the State.

1.4.2 Secondary containment systems shall be designed, constructed and installed to:

1.4.2.1 Contain the Regulated Substances released from the UST System until they are detected and removed; and

1.4.2.2 Prevent the Release of Regulated Substance to the environment at any time during the Operational Life of the UST System; and

1.4.2.3 Be checked for evidence of a Release at least once every thirty (30) Days.

1.4.3 Secondary Containment systems shall include the following:

1.4.3.1 Double-walled Tank; and

1.4.3.2 Double-walled Regulated Substance and vapor return Piping and, where required, vent Piping; and

1.4.3.3 Containment Sumps at the Tank top and under each Dispenser that meet the requirements of Part B, subsection 1.25; and

1.4.4 All Secondary Containment systems shall be constructed in accordance with acceptable engineering practices, industry standards and shall have Release Detection in accordance with Part B, subsection 1.9.

1.5 Double Walled UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.5.1 Acceptable UST System designs in Part B, subsection 1.3 shall be fabricated in double walled construction for Tanks and Piping in accordance with accepted engineering practice and industry standards.

1.5.2 A double walled Tank which is designed and manufactured in accordance with the following requirements satisfies the requirements for Secondary Containment in Part B, subsection 1.4:

1.5.2.1 The interstitial space of the double walled Tank can be monitored for Releases; and

1.5.2.2 Outer jackets made of steel shall be coated as prescribed in Part B, subsection 1.6.2; and

1.5.2.3 There are no penetrations of any kind through the jacket to the Tank except top entry manholes and fittings; and

1.5.2.4 The outer jacket shall cover the entire circumference of the Tank; and

1.5.2.5 The jacket shall be able to contain a liquid or be able to contain a vacuum from the time of manufacture completion until the time of installation.

1.5.2.6 All Tanks shall be equipped with a strike plate beneath all Tank openings.

1.6 Cathodically Protected Steel UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.6.1 Cathodically Protected steel UST Systems shall be designed, constructed, installed and tested in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the applicable industry standards, including the following:

1.6.1.1 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

1.6.1.2 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

1.6.1.3 STI-P3, *Specification for sti-P3® System for External Corrosion Protection of Underground Steel Storage Tanks.*

1.6.1.4 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks*.

1.6.1.5 STI R-972, *Recommended Practice for the Addition of Supplemental Anodes to sti-P3® USTs.*

1.6.2 The Tank shall be coated with a suitable Dielectric Material in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*.

1.6.3 Field-installed Cathodic Protection systems shall be designed, constructed, installed and tested in accordance with manufacturer's specifications, accepted engineering practice and the requirements listed in this Section.

1.6.4 Each Cathodic Protection system shall include sufficient monitoring stations to enable Owners and Operators to check on the adequacy of the Cathodic Protection system.

1.6.5 UST Systems that are protected by Sacrificial Anodes shall be electrically insulated from the Piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to Regulated Substances, additives, corrosive soils or groundwater.

1.7 Fiberglass Reinforced Plastic UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.7.1 Fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standard:

1.7.1.1 UL 1316, *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol-Gasoline Mixtures.*

1.7.2 Fiberglass reinforced plastic UST Systems shall be of sufficient structural strength to withstand normal handling and underground use and shall be Compatible with the Regulated Substance and additives stored, corrosive soils and groundwater. UST System construction materials shall be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

1.7.3 Fiberglass reinforced plastic Tanks shall be tested for deflection in accordance with the manufacturer's requirements at the time of installation.

1.8 Steel with Non-Metallic or Coated Outer Shell UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.8.1 Steel with non-metallic or coated outer shell UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.8.1.1 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

1.8.1.2 UL 58; *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

1.8.1.3 STI F-922, *Specification for Permatank®.*

1.8.1.4 STI F-894, ACT-100® *Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks.*

1.8.1.5 STI F-961, ACT-100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.*

1.8.1.6 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks.*

1.8.2 The coating shall not corrode under adverse underground electrolytic conditions and shall be Compatible with the Regulated Substances and additives stored.

1.8.3 The coating shall be factory inspected for air pockets, cracks, blisters, pinholes and electrically tested by a ten thousand (10,000) volts holiday test performed over one hundred percent (100%) of the surface for coating short circuits or coating faults or in accordance with the manufacturer's specifications.

1.8.4 Any defects shall be Repaired in accordance with standard engineering practice and the manufacturer's requirements.

1.9 Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.9.1 General Requirements

1.9.1.1 Owners and Operators of UST Systems shall provide a method, or combination of methods of Release Detection on all UST Systems that meets the following requirements:

1.9.1.1.1 Utilizes a method or methods capable of detecting a Release from any portion of the Tank and the connected underground Piping that routinely contain Regulated Substance at a minimum of once every thirty (30) Days; and

1.9.1.1.2 Is installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, including routine Maintenance and service checks for operability or running condition; and

1.9.1.1.3 Meets the performance standards for Release Detection in this Section, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. The method shall be capable of detecting the leak rate or quantity specified for Precision Testing, automatic tank gauging, Line leak detectors, and Line tightness testing methods specified in these Regulations with a probability of detection of at least 0.95 and a probability of false alarm no greater than 0.05; and

1.9.1.1.4 Is operational prior to Regulated Substance being placed in the UST System.

1.9.1.1.5 Statistical Inventory Reconciliation (SIR) methods are not approved for Tank Release Detection.

1.9.1.2 Owners and Operators shall implement the indicated Release investigation procedures in Part E of these Regulations if the Release Detection equipment or method shows indication of a Release.

1.9.1.3 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

1.9.2 Methods of Release Detection for Tanks Storing Regulated Substance

1.9.2.1 Owners and Operators shall monitor UST Systems for Releases through the use of inventory control procedures and at least one of the following Release Detection methods:

1.9.2.1.1 Continuous interstitial monitoring; or

1.9.2.1.2 For Tanks that are installed prior to January 11, 2008 that are unable to, by design, accommodate the continuous interstitial monitoring Release Detection method required in Part B, subsection 1.9.2.1.1, automatic Tank gauge performing Tank tightness testing in accordance with Part B, subsection 1.9.5 for Tanks is permitted.

1.9.3 Inventory Control Requirements for Tanks Storing Regulated Substance

1.9.3.1 Inventory control procedures shall meet the following requirements:

1.9.3.1.1 Every Owner and Operator shall perform inventory control procedures and shall maintain inventory control records for each Tank containing a Regulated Substance. Records shall be kept for each Tank, or cluster of Tanks if they are interconnected, and shall include measurements of bottom water levels, sales, use, deliveries, inventory on hand and losses or gains. Reconciliation of records shall be kept current, shall account for all variables which could affect an apparent loss or gain and shall be in accordance with generally accepted practices. The data shall be accumulated for each Day a Tank has Regulated Substance added or withdrawn but not less frequently than once every seven (7) Days, and shall include as a minimum:

1.9.3.1.1.1 Description and amount of Regulated Substance in the Tank measured in inches to the nearest one-eighth (1/8) of an inch. The equipment used shall be capable of measuring the level of Regulated Substance over the full range of the Tank's height to the nearest one-eighth (1/8) of an inch. These measurements shall be converted from inches to gallons and these measurements and conversions shall be performed daily; and

1.9.3.1.1.2 Inputs and outputs of Regulated Substance in gallons recorded daily; and

1.9.3.1.1.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer's specifications; and

1.9.3.1.1.4 Regulated Substance dispensing equipment is metered and recorded within the local standards for meter calibration or an accuracy of six (6) cubic inches for every five (5) gallons of Regulated Substance withdrawn; and

1.9.3.1.1.5 Weekly assessment of the amount of water in UST Systems storing non-ethanol Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance or other UST Systems with prior Department approval. The measurement of water level in the bottom of the Tank shall be made to the nearest one-eighth (1/8) of an inch. If the measurement is two (2) inches or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements; and

1.9.3.1.1.6 Daily assessment of the amount of water in UST Systems storing ethanol blended Regulated Substance. The measurement of water level in the bottom of the Tank shall be made to the nearest one-eighth (1/8) of an inch; and

1.9.3.1.1.7 For UST Systems storing ethanol blended Regulated Substance with a storage capacity of eight thousand (8000) gallons or less, if the measurement is one (1) inch or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements; and

1.9.3.1.1.8 For UST Systems storing ethanol blended Regulated Substance with a storage capacity greater than eight thousand (8000) gallons, if the measurement is two (2) inches or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements; and

1.9.3.1.1.9 Daily reconciliation of the amount of Regulated Substance added to and removed from the Tank. Recommended procedures for Tank inventory and reconciliation procedures are detailed in API RP 1621, *Bulk Liquid Stock Control at Retail Outlets*, and shall include at a minimum:

1.9.3.1.1.9.1 Losses or gains from each Day's inventory shall be reconciled at the end of each calendar month; and

1.9.3.1.1.9.2 For any day in which there is a loss of five percent (5%) or more of the calculated daily inventory in gallons, or for any month in which there is a significant loss or gain of Regulated Substance that meets or exceeds one percent (1%) of the total monthly throughput plus one hundred thirty (130) gallons, or any month in which there is an unexplainable consistent negative trend, the indicated Release investigation procedure in Part E of these Regulations shall be followed; and

1.9.3.2 Tanks equipped with automatic inventory control systems or continuously operating automatic in tank gauging systems may use these devices to perform inventory reconciliation procedures.

1.9.3.3 All automatic systems utilized for performing inventory procedures shall comply with the preventative Maintenance program requirements of Part B, subsection 1.9.5.2.

1.9.3.4 Failure to maintain and reconcile inventory control records may be cause for the Department to require UST System tightness test(s) and inspection(s) of the UST Facility at the expense of Owners and Operators.

1.9.4 Interstitial Monitoring Release Detection Requirements for Tanks Storing Regulated Substance

1.9.4.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a leak from any portion of the Tank that routinely contains Regulated Substance.

1.9.4.2 At a minimum of once every thirty (30) calendar Days, Owners and Operators shall inspect all interstitial monitoring devices utilized for Release Detection for evidence of a Release from the UST System and shall record the results.

1.9.4.3 The interstitial monitoring equipment shall be capable of producing a record of Release Detection monitoring results. Original test records or equivalent third party test reports that duplicate the ATG console settings and test programming shall be made available upon request.

1.9.4.4 Owners and Operators shall maintain records of the interstitial Release monitoring results for three (3) years.

1.9.4.5 Owners and Operators shall have all interstitial monitoring equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.4.5.1 Inspection of the console for printer operation if so equipped; and

1.9.4.5.2 Verification of the system setup values and battery backup; and

1.9.4.5.3 Verification of the test programming; and

1.9.4.5.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.4.5.5 Inspection and testing of all probes and interstitial sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.4.5.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.4.5.7 Correction of any problems found as a result of the required inspection.

1.9.4.6 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment for three (3) years and any Repairs performed as a result of the inspection for their time of ownership or operation of the UST System.

1.9.5 Automatic Tank Gauging Release Detection Requirements for Tanks Storing Regulated Substance

1.9.5.1 Tank tightness testing using automatic tank gauging (ATG) equipment shall meet the following requirements:

1.9.5.1.1 The ATG equipment can detect a 0.1 gallon per hour leak rate from any portion of the Tank that routinely contains Regulated Substance; and

1.9.5.1.2 The ATG equipment shall be capable of producing a record of Release Detection test results; and

1.9.5.1.3 At a minimum of once every thirty (30) Days the ATG equipment shall perform a Release Detection test for each Tank and shall produce a record of such test. Original test records or equivalent third party Release Detection test reports that duplicate the ATG console settings and test programming shall be made available upon request; and

1.9.5.1.4 If used for inventory control, the ATG equipment shall be capable of conducting inventory control in accordance with Part B, subsection 1.9.3.

1.9.5.1.5 Owners and Operators shall maintain a record of all Release Detection tests performed by the ATG equipment for three (3) years.

1.9.5.2 Owners and Operators shall have all ATGs inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.5.2.1 Inspection of the ATG console for proper printer operation if so equipped; and

1.9.5.2.2 Verification of the system setup values and battery backup; and

1.9.5.2.3 Verification of the test programming; and

1.9.5.2.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.5.2.5 Inspection and testing of the magnetostrictive probes and sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.5.2.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.5.2.7 Correction of any problem noted as a result of the required inspection.

1.9.5.2.8 Owners and Operators shall maintain records of the annual inspections of the ATG and any Repairs performed as a result of the inspection three (3) years.

1.10 Anchoring Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.10.1 Support and anchorage shall be provided for all new installations to avoid Tank flotation and shall be installed in accordance with the PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.10.2 One or more of the following methods of anchorage shall be utilized:

1.10.2.1 Reinforced concrete deadmen anchors; or

1.10.2.2 Bottom hold-down pad which consists of eight (8) inches of reinforced concrete that extends eighteen (18) inches beyond the Tank sides and twelve (12) inches beyond each end; or

1.10.2.3 Reinforced concrete slab over the Tank.

1.10.3 All exposed metallic components of hold down systems shall be Electrically Isolated and Cathodically Protected when the hold down system is required by the Department.

1.11 Backfill Material Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.11.1 Backfill material shall consist of sand, crushed rock or pea gravel. The material shall be clean, washed, inert, free flowing, homogeneous, well granulated, non corrosive, and free of debris, rock, ice, snow or organic material. Particle length of crushed rock or pea gravel shall be no less than one-eighth (1/8) inch and no more than three-fourths (3/4) inch in size. Backfill material shall comply with the Tank manufacturer's specifications. Mixing of backfill with native soil or foreign objects is prohibited.

1.11.2 The backfill depth shall be consistent with the requirements in PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.12 Requirements for Installation of UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance in an Existing UST Facility

1.12.1 If a new UST System shall be installed in or near an existing or previous UST System, Owners and Operators shall conduct a Site Assessment in accordance with Part B, subsections 1.28.10 and 1.28.11, and provide a means of Release Detection that shall detect any future Release from any portion of the UST System in accordance with Part B, subsections 1.9 and 1.18.

1.13 Tank and Piping Installation, Inspection and Testing Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.13.1 Prior to installation Tank system materials and equipment shall be inspected for flaws, surface cracks, holes, large scrapes, blisters, indentations and other indications of damage. All defects and Repairs to the UST System shall be recorded and the record submitted with a site completion report to the Department.

1.13.2 All Tanks shall be air pressure tested according to the manufacturer's specifications prior to installation of the Tank(s) into the excavation. The installer shall soap the exterior, particularly its seams and fittings, and pressure test the Tank(s) using the manufacturer's specifications to locate and correct defects. Tank and interstitial space testing shall be conducted according to the manufacturer's recommendations and accepted engineering practices.

1.13.3 After installation all Piping, including all interstitial spaces, shall be pressure tested according to the manufacturer's specifications prior to backfilling the excavation.

1.13.4 After installation of the Tank and integral Piping is complete and prior to the initial use of the UST System, the entire system shall be tested in accordance with current industry standards and practices and in the following manner to ensure the system is tight:

1.13.4.1 All testing of UST Systems shall be accomplished by the Precision Test method described in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*, or other test approved by the Department which is of equivalent or superior accuracy; and

1.13.4.2 All testing of UST Systems shall be able to account for the effects of thermal expansion or contraction of the Regulated Substances, vapor pockets, Tank deformation, evaporation or condensation, temperature stratification in the UST and the location of the water table; and

1.13.4.3 The required Precision Tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing

procedures and requirements established by the test system manufacturer and current industry standards and practices.

1.13.5 The Department reserves the right to request confirmatory system tightness tests to verify any test results submitted by an Owner, Operator, or contractor.

1.13.6 Owners and Operators shall permit periodic inspection of the UST System installation by the Department.

1.13.7 During the installation of all new UST Systems, every stage of the construction shall be documented with photographs to demonstrate that the UST System was installed in compliance with the requirements for new UST Systems. Upon completion of the installation, copies of the photographs, as built plan, and required certification(s) as required in Part A, subsections 4.6.11 and 4.6.12 shall be submitted to the Department within thirty (30) Days of the completion of the UST System installation. The Facility Owner and Operator shall keep copies of all documents and photographs on file for the life of the UST System.

1.14 General Piping Installation Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.14.1 Piping shall be installed in accordance with the manufacturer's specifications.

1.14.2 The Piping layout shall be designed to minimize crossed lines and interference with conduit and other UST System components. If crossing of lines is unavoidable, clearance shall be provided to prevent contact of the Pipes.

1.14.3 All Regulated Substance, vent and vapor return Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot.

1.14.4 The Pipe joints shall be cut and deburred according to manufacturer's specifications to provide Liquid Tight seals.

1.14.5 When rigid Piping is used, flexible connector(s) shall be installed at the Tank end of each Regulated Substance Pipe, vent Pipe and vapor recovery Pipe as well as at the base of each Dispenser and vent riser on all new installations. Double elbow swing joints are prohibited.

1.14.6 All underground metal fittings, flexible connectors, joints, and Pipes shall be isolated from contact with the soil.

1.14.7 Manifolding of Regulated Substance Piping under dispensers is prohibited.

1.14.8 When manifolding USTs to one Regulated Substance Line, the Line is required to be manifolded at the Tank end. The two methods of manifolding at the Tank end allowed by the Department are:

1.14.8.1 Siphon system between two or more USTs; or

1.14.8.2 Manifolding of submersible turbine pumps

1.14.9 For rigid or semi-rigid Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.14.10 For flexible plastic Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the replaced portion of an existing Piping Run is less than fifty percent (50%), the entire Pipe between two discrete end points shall be replaced. The Replacement Piping shall be from the same manufacturer and of the same specifications as the Pipe that is being replaced. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.15 UST Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.15.1 Underground Piping shall be protected from corrosion in accordance with accepted corrosion engineering practices and shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.15.1.1 NFPA 30, *Flammable and Combustible Liquids Code.*

1.15.1.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.15.1.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.15.1.4 UL Standard 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.15.1.5 UL Standard 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-connection Fittings for Petroleum Products and LP-Gas.*

1.15.1.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.15.2 Underground Piping systems shall be designed, constructed, and installed in a manner which will permit periodic tightness testing of the entire Piping system without the need for excavation and disassembly.

1.15.3 Acceptable designs for Underground Piping construction include fiberglass reinforced plastic and flexible plastic Piping.

1.15.4 Underground Piping burial depth shall provide at least six (6) inches of distance between the Piping and the trench excavation walls. The Piping trench excavation shall provide a minimum of six (6) inches of bedding and a minimum of eighteen (18) inches of compacted backfill material and pavement above the top of the Piping. Individual Piping Runs within the same Piping trench excavation shall be separated by a distance of at least twice the nominal Pipe diameter.

1.16 Fiberglass Reinforced Plastic and Flexible Plastic Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.16.1 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the manufacturer's specifications.

1.16.2 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the following industry codes, as applicable:

1.16.2.1 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.16.2.2 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-connection Fittings for Petroleum Products and LP-Gas.*

1.16.2.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.16.2.4 NFPA 30, *Flammable and Combustible Liquids Code.*

1.16.2.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.16.2.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.16.3 The construction materials, joints and joint adhesives of all Fiberglass reinforced plastic and flexible plastic Pipes shall be Compatible with the Regulated Substance and additives stored, soil and groundwater.

1.16.4 Pipes, fittings and adhesives shall be designed, fabricated, and factory tested in accordance with generally accepted structural, material and performance standards for underground Piping systems.

1.17 Suction Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.17.1 Suction Piping shall operate at less than atmospheric pressure and shall be designed, constructed, and installed to meet the requirements of Part B, subsections 1.17.1.1 or 1.171.2:

1.17.1.1 Safe suction Piping systems shall be designed and constructed in accordance with the following requirements:

1.17.1.1.1 The below grade Piping shall be constructed so that if suction is released the contents of the Pipe will drain back into the Tank; and

1.17.1.1.2 Only one (1) check valve shall be included in each suction Pipe; and

1.17.1.1.3 The check valve shall be located directly below and as close as practical to the suction pump.

1.17.1.2 Suction Piping systems with a foot valve (U.S. Suction) shall be designed and constructed in accordance with the following requirements:

1.17.1.2.1 The below grade Piping shall be constructed so that the Piping slopes back to the Tank; and

1.17.1.2.2 A foot valve is installed at the Tank.

1.18 General Release Detection Requirements for UST Piping for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.18.1 Owners and Operators shall equip all underground Piping that routinely contains Regulated Substances with a method, or combination of methods of Release Detection that can detect a Release from any portion of the underground Piping that routinely contains Regulated Substance.

1.18.2 Statistical Inventory Reconciliation (SIR) methods are not approved for Piping Release Detection.

1.18.3 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Piping Release Detection equipment or method shows indication of a Release.

1.18.4 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s), inspection(s) of the UST Facility or an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

1.19 Pressurized Piping Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.19.1 Line Leak Detector and Line Tightness Testing Requirements

1.19.1.1 Underground Piping that conveys Regulated Substances under pressure shall be equipped with an automatic Line leak detector.

1.19.1.2 The automatic Line leak detector shall alert the Owner and Operator to the presence of a Release of a Regulated Substance in accordance with subsection 1.19.1.2.1 or 1.19.1.2.2.

1.19.1.2.1 Mechanical automatic Line leak detectors shall be capable of restricting the flow of the Regulated Substance.

1.19.1.2.2 Electronic automatic Line leak detectors shall be capable of restricting the flow of the Regulated Substance. Electronic automatic Line leak detectors may be configured to shut down the UST System and trigger an audible or visual alarm.

1.19.1.3 Mechanical and Electronic automatic Line leak detectors shall be capable of reacting to leaks of three (3) gallons per hour at ten (10) pounds per square inch line pressure within one (1) hour.

1.19.1.4 Owners and Operators shall conduct an annual test of the operation of the automatic Line leak detector while installed in the UST System and under normal operating conditions. All Mechanical and Electronic automatic Line leak detectors shall pass a function test at least once every twelve (12) months at three (3) gallons per hour (gph) at ten (10) pounds per square inch line pressure within one (1) hour.

1.19.1.5 Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, including the primary and secondary Piping, in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.19.1.6 Owners and Operators of UST Systems with underground pressurized Piping systems shall use a Piping tightness test method designed to detect a Release from any portion of the underground Piping system that routinely contains Regulated Substances.

1.19.2 Piping Interstitial Monitoring Requirements

1.19.2.1 Owners and Operators of UST Systems with underground pressurized Piping systems constructed of double wall design shall utilize continuous interstitial monitoring systems that meet the following requirements:

1.19.2.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Regulated Substance; and

1.19.2.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring equipment that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

1.19.2.1.3 Owners and Operators shall maintain records of the interstitial Release Detection for three (3) years; and

1.19.2.1.4 The interstitial monitoring system shall be designed and maintained to alert the Owner and Operator to the presence of a Release by shutting off the flow of the Regulated Substance; and

1.19.2.1.5 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part B, subsection 1.27; and

1.19.2.1.6 All Containment Sumps shall comply with the testing and monitoring requirements of Part B, subsection 1.25.

1.19.2.2 Continuous interstitial monitoring systems that comply with Part B, subsection 1.19.2.1 may be utilized to meet the annual piping tightness test requirements of Part B, subsections 1.19.1.5 and 1.19.1.6 after notification to the Department. This allowance shall not apply to UST Systems approved by the Department in accordance with Part B, subsection 1.4.1.

1.19.2.3 When there is a failure of any annual piping tightness test, conducted voluntarily or to meet the requirements of these Regulations, the test failure shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

1.20 Suction Piping Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.20.1 Release Detection is not required for suction Piping that is designed and constructed to meet the requirements of Part B, subsection 1.17.1.1.

1.20.2 Suction Piping designed and constructed to meet the requirements of Part B, subsection 1.17.1.2 shall have Release Detection in accordance with Part B, subsection 1.19.2.1.

1.20.3 Owners and Operators of suction Piping that is designed and constructed in accordance with Part B, subsection 1.17.1.2 and Part B, subsection 1.30.5.1 shall conduct a Line tightness test a minimum of once every three (3) years in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

1.21 Spill Prevention Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.21.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to spilling do not occur.

1.21.2 To prevent spilling associated with Regulated Substance transfer to the UST System, Owners and Operators shall comply with the requirements of the following industry standards:

1.21.2.1 NFPA 30, *Flammable and Combustible Liquids Code*; or

1.21.2.2 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*; or

1.21.2.3 API RP 1621, *Bulk Liquid Stock Control at Retail Outlets.*

1.21.3 Owners and Operators shall equip all Regulated Substance UST Systems with impervious spill containment devices that form a Liquid Tight seal around the fill pipe connection and the Stage I vapor recovery connections, where applicable.

1.21.4 All spill containment devices installed around the fill Pipe shall have a minimum containment capacity of fifteen (15) gallons and a minimum capacity of five (5) gallons around the vapor Pipe.

1.21.5 Owners and Operators shall immediately upon discovery remove water, Regulated Substance or debris that accumulates in any spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state, and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

1.21.6 All precautions shall be taken to prevent Tank overfilling, spilling and dripping.

1.21.7 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 1.21.9.

1.21.8 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 1.21.9 and the interstitial sensors shall be tested in accordance with Part B, subsection 1.27.

1.21.9 Hydrostatic testing procedures shall meet the following requirements:

1.21.9.1 For post-construction hydrostatic testing, the spill bucket shall be completely filled with liquid and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.9.2 For periodic hydrostatic testing, the spill bucket shall be completely filled with liquid and held for one (1) hour. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.10 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

1.21.11 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22 Overfill Prevention Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.22.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to overfilling do not occur.

1.22.2 The Person In Charge of the transfer of Regulated Substance to the UST shall adhere to proper safety precautions and procedures for transfer as found in NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids* and API RP 1621, *Bulk Liquid Stock Control at Retail Outlets* and shall comply with the following:

1.22.2.1 The Person In Charge of the transfer operation shall first check the UST to ensure that the volume available in the UST is greater than the volume of Regulated Substance to be transferred to the UST before the transfer is made; and

1.22.2.2 During the transfer, the Person In Charge shall continuously monitor the transfer operation to prevent an Overfill Release; and

1.22.2.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer's specifications; and

1.22.2.4 At the conclusion of the transfer, the Person in Charge shall collect any Regulated Substance that remains in the transfer hose and shall ensure it is properly managed and does not reach the environment; and

1.22.2.5 The Person in Charge shall take all reasonable precautions to prevent spilling and dripping.

1.22.3 Owners and Operators shall install and maintain overfill prevention equipment that shall:

1.22.3.1 Automatically achieve partial shut off of flow into the UST when the UST is ninety-five percent (95%) full and complete shut off of flow at ninety-eight percent (98%) full; or

1.22.3.2 Alert the transfer operator when the UST is no more than ninety percent (90%) full by triggering a high-level audible and visual alarm.

1.22.3.3 Vent Line flow restrictors (ball float valves) shall not be installed for overfill prevention after January 11, 2020.

1.22.3.4 Existing vent line flow restrictors (ball float valves) shall be removed not later than January 11, 2023 unless the following condition exists:

1.22.3.4.1 Vent Line flow restrictors (ball float valves) may remain in place provided the overfill prevention equipment automatically achieves partial shut off of flow into the UST when the UST is eighty-five percent (85%) full and complete shut off of flow at eighty-eight percent (88%) full.

1.22.3.5 Vent line flow restrictors (ball float valves) shall not be used in conjunction with the high level alarm overfill prevention method specified in Part B, subsection 1.22.3.2.

1.22.4 UST Systems that receive pressurized deliveries require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention or an automatic flow shut-off valve designed for pressurized deliveries.

1.22.5 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22.6 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. The first inspection shall occur prior to October 13, 2021. At a minimum, the inspection shall ensure that overfill prevention equipment is functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part B, subsection 1.22.3.

1.23 Fill Line Protection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.23.1 Owners and Operators shall clearly mark all fill Lines for UST Systems to indicate the size of the Tank and the type of Regulated Substance stored. These markings shall be as follows:

1.23.1.1 A label or permanent tag at the fill connection which states the size of the UST and the specific type of Regulated Substance stored; and

1.23.1.2 A color symbol system implemented according to the following requirements:

1.23.1.2.1 All fill and vapor recovery covers shall be marked consistent with API RP 1637, *Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals* or API IP 1542, *Identification Markings for Dedicated Aviation Fuel Manufacturing and Distribution Facilities, Airport Storage and Mobile Fuel Equipment*; and

1.23.1.2.2 A different color symbol shall be used for each type of Regulated Substance or grade of Regulated Substance being stored at the Facility.

1.23.2 Pipes and other openings not used for transfer of Regulated Substance at the UST Facility shall not be painted any color which would be associated with the color symbol designated for marking the Regulated Substance stored at the Facility. It is particularly important that openings with access to soil and ground water not be confused with Regulated Substance fill Lines.

1.24 Corrosion Protection Operation and Maintenance Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.24.1 General Requirements

1.24.1.1 Owners and Operators of steel UST Systems with corrosion protection systems shall operate and maintain the system in accordance with the following industry standards:

1.24.1.1.1 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*; and

1.24.1.1.2 NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*; and

1.24.1.1.3 NACE International SP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems*; and

1.24.1.1.4 NFPA 30, *Flammable and Combustible Liquids Code*; and

1.24.1.1.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.24.1.2 Owners and Operators of steel UST Systems with corrosion protection systems shall maintain and operate the corrosion protection system to continuously provide corrosion protection to the metal components of the UST System that routinely contain a Regulated Substance and are in contact with the ground to ensure that Releases due to corrosion are prevented for the life of the UST System.

1.24.1.3 Cathodic Protection systems shall be designed and installed to allow determination of the current operating status.

1.24.2 Sacrificial Anode Cathodic Protection System Operation and Maintenance Requirements

1.24.2.1 Owners and Operators shall test all UST Systems equipped with Sacrificial Anode Cathodic Protection systems for proper operation using standard corrosion engineering practices and in accordance with the following requirements:

1.24.2.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, NACE TM0101, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,* and the manufacturer's specifications and shall include the following:

1.24.2.1.1.1 A minimum of three (3) voltage readings equally spaced along the center line, including both ends and center for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) voltage readings equally spaced along the center line, including both ends, center and two intermediate locations, for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

1.24.2.1.1.2 A minimum of one (1) voltage reading for every ten (10) feet of Piping.

1.24.2.2 All Sacrificial Anode Cathodic Protection systems that protect underground Facility components shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) months of installation and at least once every twelve (12) months thereafter.

1.24.2.3 The Sacrificial Anode Cathodic Protection system shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) weeks after underground work is performed at or near a site with a Sacrificial Anode Cathodic Protection system and once every twelve (12) months thereafter.

1.24.2.4 Owners and Operators shall Repair or replace the Sacrificial Anode Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the requirements of Part B, subsection 1.6 if the Sacrificial Anode Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required

reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the corrosion protection system.

1.24.2.5 UST System Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of a Sacrificial Anode Cathodic Protection system.

1.24.2.6 The Department shall approve in writing all Cathodic Protection Repair or Retrofit plans prior to work commencing.

1.24.2.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

1.24.2.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the Sacrificial Anode Cathodic Protection system:

1.24.2.8.1 Results of one of the following:

1.24.2.8.1.1 The two (2) most recent Sacrificial Anode Cathodic Protection system tests including the failed test, or

1.24.2.8.1.2 The results of an internal assessment, or

1.24.2.8.1.3 The results of a third party approved integrity assessment; and

1.24.2.8.2 Records of the Tank Release Detection method from the date of the most recent passed Sacrificial Anode Cathodic Protection test.

1.24.2.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

1.24.2.10 Impressed current Cathodic Protection systems shall not be utilized as a Repair, Upgrade or Retrofit for a failed Sacrificial Anode Cathodic Protection system after January 11, 2008.

1.24.2.11 The use of alternate methods of monitoring shall be those described in NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, and shall only be used with prior written approval from the Department.

1.24.2.12 Owners and Operators shall maintain a record of the operation of Sacrificial Anode Cathodic Protection systems to demonstrate compliance with the requirements of this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

1.24.2.12.1 The results of all tests and inspections of the Sacrificial Anode Cathodic Protection system.

1.25 Containment Sump Testing Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.25.1 All dispenser, Tank top, transition and any other Containment Sumps of single wall design utilized as part of a Release Detection system with sensors, shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part B, subsection 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.2 All Dispenser, Tank top, transition and any other Containment Sumps of single wall design not utilized as part of a Release Detection system shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part B subsection, 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.3 All Dispenser, Tank top, transition and any other Containment Sumps of double wall design with continuous monitoring of the interstitial space shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part B, subsection 1.25.4 and the interstitial sensors shall be tested in accordance with Part B, subsection 1.27.

1.25.4 All Dispenser, Tank top, transition and any other Containment Sump tightness testing shall be performed in accordance with the manufacturer's specifications or as directed by the Department. Hydrostatic testing procedures shall meet the following requirements:

1.25.4.1 For post-construction hydrostatic testing, the Containment Sump shall be completely filled and held for twenty-four (24) hours. For any measurable liquid level drop, the Containment Sump is considered non-Liquid Tight.

1.25.4.2 For periodic hydrostatic testing, the Containment Sump shall be filled to a minimum of four (4) inches above the highest penetration fitting or sump sidewall seam, whichever is higher. The liquid level shall be no less than twenty-four (24) inches from the bottom of the sump and held for a minimum of one (1) hour. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

1.25.4.3 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

1.25.5 All access manholes associated with Containment Sumps shall be sized such that the manhole skirt is sufficiently larger than the Containment Sump lid to allow adequate access to the sump and allow for surface water drainage.

1.25.6 All Dispenser Containment Sumps shall be installed and maintained as to be capable of being visually inspected at all times for evidence of a Release and shall not be filled with any material such as pea gravel or native soil, or the Containment Sump shall be continuously monitored for Releases.

1.25.7 Owners and Operators shall immediately upon discovery remove water, Regulated Substance or debris that accumulates in any Containment Sump. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements.

1.26 Dispenser Sump Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.26.1 Dispenser sumps shall be designed and installed such that any Regulated Substance accumulating within the sump is contained and conveyed to the Tank top sump via the Piping interstitial space where it shall be monitored and detected.

1.26.2 If equipped with a Dispenser sump sensor, the sensor shall be equipped with an automatic audible or visual Release Detection alarm system.

1.27 Testing and Monitoring Procedures for Sump Sensors and Interstitial Sensors for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.27.1 All sensors utilized for Release Detection shall be equipped with an automatic audible or visual alert system and shall shut down the UST System in the event of an alarm.

1.27.2 Owners and Operators shall perform a functionality test of all sump and interstitial sensors at a minimum of once every twelve (12) months in accordance with the manufacturer's specifications or as directed by the Department to verify proper sensor operation.

1.27.3 All sensors installed in a sump or interstitial space for the purpose of detecting a Release from the UST System shall be installed directly on the bottom at the lowest point of the sump or interstitial space and in accordance with the manufacturer’s specifications such that the sensor is capable of detecting any accumulation of Regulated Substance.

1.27.4 All sensors utilized for Release Detection shall be monitored for releases at a minimum of once every thirty (30) Days.

1.28 Repair, Retrofits and Upgrade Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.28.1 All Retrofits and Upgrades to existing UST Systems shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

1.28.1.1 All Repairs that require post-construction testing shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

1.28.1.2 All Repairs not meeting the requirements of Part B, subsection 1.28.1.1, shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations.

1.28.2 Owners and Operators shall report any unusual operating conditions to the Department in accordance with the requirements of Part E, subsection 1.2 of these Regulations.

1.28.3 All equipment installed after January 11, 2008 shall be installed, operated and maintained such that manufacturer's warranties are not voided.

1.28.4 Owners and Operators shall ensure that Repairs, Retrofits or Upgrades will prevent Releases due to structural failure or corrosion as long as the UST System is used to store Regulated Substance.

1.28.5 Owners and Operators shall test the Cathodic Protection system in accordance with Part B, subsection 1.24 within six (6) weeks and every twelve (12) months thereafter following the Repair of any Cathodically Protected UST System, to ensure it is operating properly.

1.28.6 Owners and Operators shall maintain records for each Repair, Retrofit or Upgrade for their time of ownership or operation of the UST System.

1.28.7 After any Repair, Retrofit or Upgrade to an UST System, Owners and Operators shall have the applicable portions of the UST System tested in accordance with these Regulations, or as directed by the Department, before the UST System is placed into service.

1.28.8 Repairs to fiberglass reinforced plastic Tanks may be made only by the manufacturer or by its authorized representatives.

1.28.9 Owners and Operators may not Repair holes in Piping and fittings, but shall replace any piece of such Piping or fittings from which a Release has occurred. Replacement Piping and fittings shall meet all applicable Piping requirements in Part B, Section 1.0. Loose fittings and joints in Piping that have been tightened to eliminate leakage may be put back into service.

1.28.10 At any time during the course of a Repair, Retrofit or Upgrade when there is an indication of a Release the requirements of Part E of these Regulations shall be followed.

1.28.11 At any time excavation of soil or removal of concrete, asphalt or other cover is required during the course of a Repair, Retrofit or Upgrade, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Repair, Retrofit or Upgrade of the UST System.

1.28.12 Within sixty (60) Days of completion of a Repair, Retrofit or Upgrade of an UST System Owners and Operators and UST Contractors shall submit documentation to the Department including the following:

1.28.12.1 Repair, Retrofit or Upgrade completion documentation; and

1.28.12.2 Results of sampling required in Part E of these Regulations or Part B, subsection 1.28.10; and

1.28.12.3 Results of any UST System tests required by the Department.

1.29 Used Oil UST Systems Requirements

1.29.1 General Requirements

1.29.1.1 Owners and Operators of UST Systems used solely for the storage of Used Oil shall comply with all the requirements of these Regulations.

1.29.2 Release Detection Requirements for Used Oil UST Systems

1.29.2.1 Owners and Operators shall monitor Used Oil UST Systems for Releases through the use of the inventory control procedure in Part B, subsection 1.29.5 and at least one of the following Release Detection methods:

1.29.2.1.1 Continuous interstitial monitoring as prescribed in Part B, subsection 1.9; or

1.29.2.1.2 Automatic tank gauge performing Tank tightness testing at a minimum of once every thirty (30) Days in accordance with Part B, subsection 1.9.5 for Used Oil UST Systems installed prior to January 11, 2008 that are unable by design to accommodate the continuous interstitial monitoring Release Detection method required in Part B, subsection 1.29.2.1.1; or

1.29.2.1.3 Manual tank gauging as prescribed in Part B, subsection 1.29.4 may be utilized for Used Oil UST Systems with a nominal capacity of 550 gallons or less or Used Oil UST Systems with a nominal capacity of 551 to 1000 gallons that meet the Tank diameter criteria in Table 1. This is applicable to Used Oil UST Systems installed prior to January 11, 2008 that are unable by design to accommodate the continuous interstitial monitoring Release Detection method required in Part B, subsection 1.29.2.1.1.

1.29.3 Inventory Control Requirements for Used Oil UST Systems

1.29.3.1 Owners and Operators of Used Oil UST Systems shall utilize inventory control procedures performed in accordance with the requirements of Part B, subsection 1.29.5.

1.29.3.1.1 Owners and Operators of Used Oil UST Systems with a nominal capacity of 551 to 2000 gallons not meeting the Tank diameter criteria in Table 1 may utilize manual tank gauging performed in accordance with the requirements of subsection 1.29.4.

1.29.4 Manual Tank Gauging Procedure for Used Oil UST Systems

1.29.4.1 Owners and Operators shall utilize manual tank gauging test procedures that meet the following requirements:

1.29.4.1.1 Once every seven (7) Days the Used Oil UST System shall be tested. No Used Oil shall be added to or removed from the Used Oil UST during the prescribed test period in Table 1; and

1.29.4.1.2 At the beginning and at the end of the test period the liquid level in the Used Oil UST shall be measured twice consecutively to the nearest one-eighth (1/8) inch and the average of the two measurements shall be recorded; and

1.29.4.1.3 At the end of each seven (7) Day test period the change in Tank volume shall be calculated from the difference in the average beginning and average ending liquid level measurements and compared to the weekly test standard in Table 1 of this Part; and

1.29.4.1.4 At a minimum of once every thirty (30) Days the four (4) most recent change in tank volume numbers calculated in Part B, subsection 1.29.4.1.3 shall be averaged and this test average shall be compared to the monthly test standard in Table 1; and

1.29.4.1.5 If at any time the weekly or monthly change in Tank volume test average exceeds the test standard in Table 1, Owners and Operators shall notify the Department of an indicated Release within twenty-four (24) hours of the end of the test period; and

1.29.4.1.6 Owners and Operators shall keep all manual tank gauging records utilized to comply with inventory control requirements on file for a minimum of three (3) years and shall make the records available to the Department within fourteen (14) Days of the Department’s request; and

1.29.4.1.7 Owners and Operators shall keep all manual Tank gauging records utilized to comply with Release Detection requirements on file for three (3) years and shall make the records available to the Department within fourteen (14) Days of the Department's request.

Table 1

Tank Capacity	Minimum Duration of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
Up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when Tank diameter is 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when Tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires monthly Release Detection in accordance with Part B, subsection 1.29.2)	36 hours	13 gallons	7 gallons
1,001 -2,000 gallons (also requires monthly Release Detection in accordance with Part B, subsection 1.29.2)	36 hours	26 gallons	13 gallons

1.29.5 Inventory Control Procedure for Used Oil UST Systems

1.29.5.1 Owners and Operators shall utilize an inventory control procedure that meets the following requirements:

1.29.5.1.1 The Regulated Substance level shall be measured in inches to the nearest one-eighth (1/8) of an inch and shall be recorded each Day that an UST has Used Oil added to or withdrawn from the UST, or at least once every seven (7) Days; and

1.29.5.1.2 The water level shall be measured in inches to the nearest one-eighth (1/8) of an inch and shall be recorded at least once every seven (7) Days. If the water level changes two (2) inches

or more from the last measurement the Owner or Operator shall contact the Department within twenty-four (24) hours.

1.29.5.1.3 The amount of Used Oil removed from the UST shall be recorded, and receipts for Used Oil removal shall be maintained and made available to the Department upon request; and

1.29.5.1.4. If there is an unexplainable consistent negative trend in any given month, or if the amount of Used Oil removed from the UST is less than the amount indicated by the modified inventory control, the Department shall be notified, and the indicated Release investigation procedures in Part E of these Regulations shall be followed; and

1.29.5.1.5 Failure to maintain inventory control records for Used Oil UST Systems may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility at the expense of Owners and Operators

1.29.6 Overfill Prevention Requirements for Used Oil UST Systems

1.29.6.1 Owners and Operators of Used Oil UST Systems shall comply with the following overfill prevention requirements:

1.29.6.1.1 Used Oil UST Systems require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention.

1.29.6.1.2 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.29.6.1.3 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. At a minimum, the inspection shall ensure that overfill prevention equipment is functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part B, subsection 1.29.6.1.1.

1.29.7 Spill Prevention Requirements for Used Oil UST Systems

1.29.7.1 No Person shall construct, install, use or maintain an UST storing Used Oil without providing a reliable means of ensuring that Releases due to spilling do not occur. Owners and Operators shall comply with the requirements of Part B, subsection 1.21.2.

1.29.7.2 Owners and Operators shall equip Used Oil UST Systems with an impervious spill containment device that forms a Liquid Tight seal around any fill Pipe or pump out location.

1.29.7.3 All spill containment devices shall have a minimum containment capacity of fifteen (15) gallons or be of a design that provides equivalent environmental protection.

1.29.7.4 Owners and Operators shall immediately upon discovery remove water, Used Oil or debris that accumulates in the spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

1.29.7.5 All precautions shall be taken to prevent Tank overfilling, spilling and dripping.

1.29.7.6 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 1.21.9.

1.29.7.7 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 1.21.9 and the interstitial sensors shall be tested in accordance with Part B, subsection 1.27.

1.29.7.8 Owners and Operators shall report, investigate and clean up any spills and overfills in accordance with Part E of these Regulations.

1.30 Emergency Generator UST Systems Requirements

1.30.1 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment shall comply with all the requirements of these Regulations except where modifications are specifically listed in this Section.

1.30.2 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment are exempt from the inventory control Requirements of Part B, subsection 1.9.3.

1.30.3 Owners and Operators of UST Systems used solely for the storage of a Regulated Substance to power emergency generation equipment shall utilize monthly Tank tightness testing for single wall UST Systems or continuous interstitial monitoring for double wall UST Systems to satisfy Release Detection requirements. Monthly Tank tightness testing shall be used for the life of the UST System provided it is performed in accordance with the Tank tightness test requirements in Part B, subsection 1.9.2.1.2 or continuous interstitial monitoring in accordance with Part B, subsection 1.9.2.1.1.

1.30.4 Owners and Operators of UST Systems used solely for the storage of a Regulated Substance to power emergency generation equipment shall not utilize an annual Line tightness test to comply with the pressurized Piping Release Detection tightness test requirements of Part B.

1.30.5 Owners and Operators of UST Systems used solely for the storage of a Regulated Substance to power emergency generation equipment are required to implement one of the following Line leak detection requirements:

1.30.5.1 Emergency generator systems that utilize a submersible turbine pump to convey a Regulated Substance to a day Tank or emergency generator which discharges at atmospheric pressure shall meet the Piping Release Detection requirements of Part B, subsection 1.20.2 and subsection 1.20.3.

1.30.5.2 Emergency generator systems utilizing safe suction Piping systems shall meet the Piping Release Detection requirements of Part B, subsection 1.17.1.1.

1.30.5.3 Emergency generator systems with a foot valve (U.S. Suction) shall meet the Piping Release Detection requirements of Part B, subsection 1.17.1.2.

1.30.6 Emergency generator systems meeting the requirements of subsection 1.30.5 are not eligible for the Piping slope exemption described in Part A, Section 14.0.

1.31 Routine Inspection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.31.1 Owners and Operators shall conduct an inspection at an interval no less frequently than once every thirty (30) Days, unless specified in Part B, subsection 1.31.1.6, to monitor the condition of the UST System including all Dispensers, Dispenser sumps, access ports, spill containment devices, transition sumps and Containment Sumps. The routine inspection shall at a minimum include the following:

1.31.1.1 The removal of all Dispenser covers and visual inspection for any evidence of a Release of Regulated Substance and inspection of all fittings, couplings and filters; and

1.31.1.2 The removal of all Containment Sump and transition sump covers and visual inspection of the sump for any evidence of a Release of Regulated Substance or intrusion of water; and

1.31.1.3 The inspection of all access ports and drop tubes to verify that the covers, caps and adaptors are tightly sealed and equipment is free of debris or blockage; and

1.31.1.4 The removal of all spill containment device covers and inspection to ensure all spill containment devices, including spill containment devices located within multi-port Containment Sumps, are free of debris or blockage, liquid, including water or Regulated Substance; and

1.31.1.5 The inspection of all electronic, mechanical, and hand held Release Detection equipment including automatic Tank gauges, Tank gauge sticks or groundwater bailers, for alarms, unusual operating conditions, operability and serviceability.

1.31.1.6 Submersible turbine pump Containment Sumps that are part of an UST System may be inspected no less frequently than once every twelve (12) months providing the following conditions are met:

1.31.1.6.1 UST System shall be equipped with continuous interstitial monitoring operated and maintained in accordance with Part B, subsection 1.19.1 and Part B, subsection 1.19.2.

1.31.1.6.2 All product, vent and vapor return Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot in accordance with Part B, subsection 1.14.3.

1.31.1.6.3 All sump sensors utilized for Release Detection shall be operated, monitored and tested in accordance with Part B, subsection 1.27.

1.31.1.6.4 If at any time the UST system fails to meet the conditions specified in Part B, subsection 1.31.1.6, the Owner or Operator shall notify the Department that the submersible turbine pump Containment Sump inspection shall be at a frequency no less than once every thirty (30) Days as specified in Part B, subsection 1.31.1.

1.31.2 A record of all routine inspections shall be kept on file by Owners and Operators for a minimum of three (3) years and shall be made available to the Department upon request. The records shall at a minimum include the results of all inspections including any Repairs made.

1.31.3 If at any time during a routine inspection evidence of a Release of Regulated Substance is discovered Owners and Operators shall follow the investigation requirements of Part E of these Regulations.

1.32 Internal Lining Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

1.32.1 An internal lining shall not be utilized to meet corrosion protection requirements after January 11, 2008.

1.32.2 An internal lining may be added to an UST System to ensure the UST System is Compatible with the substance stored and to prevent the release of Regulated Substance.

1.32.3 The internal lining installation, operation and Maintenance shall meet the following requirements:

1.32.3.1 The lining shall be installed in accordance with the following industry standards:

1.32.3.1.1 API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.*

1.32.3.1.2 NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks.*

1.32.3.1.3 NLPA Standard 631, Chapter B, *Future Internal Inspection Requirements for Lined Tanks.*

1.32.3.2 The lined Tank shall be tested for tightness in accordance with Part B, subsection 2.9.7 and found to be tight before the Tank is put back into service.

1.33 Additional Requirements for UST Systems at Marina Fueling Facilities

1.33.1 Marina UST Systems shall comply with all applicable requirements of these Regulations.

1.33.2 After January 11, 2020, Marina UST Systems shall comply with all applicable requirements of NFPA 30A including:

1.33.2.1 Nozzle hold-open latch devices are prohibited.

1.33.2.2 Dispensing nozzles shall be of the automatic-closing type.

1.33.2.3 Where a tank is at an elevation that produces a gravity head on the dispensing device, the tank outlet shall be equipped with a device, such as a normally closed solenoid valve, that will prevent gravity flow from on the tank to the dispenser. This device shall be located adjacent to and downstream of the outlet valve. The device shall be installed and adjusted so that liquid cannot flow by gravity from the tank to the dispenser if the piping or hose fails when not in use.

1.33.2.4 A valve to shut off the liquid supply from shore shall be provided in each pipeline at or near the approach to the pier and at the shore end of each marine pipeline.

1.33.3 Marina UST Systems, installed or Retrofitted after January 11, 2020, shall comply with the following additional requirements:

1.33.3.1 Marina UST Systems shall be installed and Retrofitted in accordance with PEI RP1000 or other method approved in writing by the Department.

1.33.3.2 For rigid or semi-rigid Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. The new piping shall be designed and installed per PEI RP 1000 or other method approved in writing by the Department. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.33.3.3 For flexible plastic Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. The new piping shall be designed and installed per PEI RP 1000 or other method approved in writing by the Department. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the replaced portion of an existing Piping Run is less than fifty percent (50%), the entire Pipe between two discrete end points shall be replaced. The Replacement Piping shall be from the same manufacturer and of the same specifications as the Pipe that is being replaced. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

11 DE Reg. 922 (01/01/08)

13 DE Reg. 1562 (06/01/10)

2.0 Installation, Operation and Maintenance Requirements for UST Systems Storing Regulated Substance Installed Prior to January 11, 2008, Excluding Consumptive Use Heating Fuel or Hazardous Substance

2.1 General Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.1.1 Owners and Operators shall ensure that all UST Systems storing Regulated Substances shall be designed, constructed, installed and operated in accordance with manufacturer's specifications, and accepted engineering practices and procedures; and in a manner which will prevent Releases of Regulated Substances to the ground waters, surface waters or soils of the State due to corrosion, structural failure, manufacturing defects, spills and overfills for the Operational Life of the UST System.

2.1.2 The material used in the construction and lining of the Tank shall be Compatible with the substances to be stored in the UST System. All UST Systems installed prior to January 11, 2008 shall meet the requirements of this Section.

2.1.3 Components of the UST System shall be approved by Underwriters Laboratories or equivalent third party certified.

2.1.4 All Regulated Substance UST Systems installed after January 11, 2008 shall be designed and installed in accordance with the Secondary Containment requirements in accordance with Part B, subsection 1.4.

2.1.5 Bare steel UST Systems or steel UST Systems coated with asphalt are prohibited.

2.1.6 Owners and Operators shall install, operate and maintain all equipment such that manufacturer's warranties are not voided.

2.1.7 Regulated Substance shall not be deposited into an UST System that is not in compliance with the financial responsibility requirements of Part F of these Regulations.

2.1.8 Dispenser hoses shall be a maximum of eighteen (18) feet in length unless otherwise approved by the Department. When not in use, hoses shall be reeled, racked or otherwise protected from damage.

2.1.9 All product shear valves shall annually be manually opened and loosened to prevent gum deposit build-up and other conditions that may affect the operation of the valve.

2.2 General Installation Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.2.1 Prior to the installation of any UST System a site survey shall be initiated by the Facility Owner and Operator. The pre installation site survey shall be conducted to determine the locations of nearby buildings, underground utilities and sewer lines.

2.2.2 Private and public drinking water wells, rivers, streams, lakes, canals, wetlands, floodplains, State designated Natural Areas, and other environmentally sensitive locations shall be recorded and incorporated into the design of the UST System Facility.

2.2.3 Owners and Operators shall submit a written plan of the UST System Facility to the Department and to any designated state or Local Government agency for approval thirty (30) Days before the installation. The scale of the plan shall be one (1) inch equals ten (10) feet or less and shall include the following:

2.2.3.1 Size and location of Tanks; and

2.2.3.2 Piping dimensions and layout; and

2.2.3.3 Dimensions and locations of vents, gauges and monitoring devices; and

2.2.3.4 Type of Regulated Substance to be stored; and

2.2.3.5 Location of dispensers; and

2.2.3.6 Location of overfill device, spill prevention system and monitoring device; and

2.2.3.7 Materials of Tank(s) and Piping construction; and

2.2.3.8 Location of and access to check valves, flexible connectors, etc. and

2.2.3.9 Location of Cathodic Protection components and test stations; and

2.2.3.10 Location of utilities (both above and underground); and

2.2.3.11 Location of electrical service components; and

2.2.3.12 Details of hold-down pads or anchoring; and

2.2.3.13 Location of nearby private drinking water wells and surface water bodies; and

2.2.3.14 Survey results from Part B, subsection 2.2.1.

2.3 UST System Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.3.1 Acceptable designs for UST System construction include:

2.3.1.1 Cathodically Protected steel; or

2.3.1.2 Fiberglass reinforced plastic; or

2.3.1.3 Steel fiberglass reinforced plastic composite; or

2.3.1.4 Composite coated; or

2.3.1.5 Cathodically Protected Double walled steel; or

2.3.1.6 Double walled fiberglass reinforced plastic; or

2.3.2 UST Systems shall be installed in accordance with these Regulations, the manufacturer's specifications, accepted engineering practices and the following industry standards:

2.3.2.1 PEI, RP 100, *Recommended Practices for Installation of Liquid Storage Systems*.

2.3.2.2 NFPA 30, *Flammable and Combustible Liquids Code*.

2.3.2.3 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

2.4 Secondary containment Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.4.1 The Department shall require Secondary containment on any portion of the UST System where aquifers underlying the UST Facility are determined to need such protection, or where groundwater below the UST Facility is within a well head protection area, or where groundwater is susceptible to contamination in order to protect the safety, health, welfare and environment of the State.

2.4.2 Secondary Containment systems shall be designed, constructed and installed to:

2.4.2.1 Contain the Regulated Substances Released from the UST System until they are detected and removed; and

2.4.2.2 Prevent the Release of Regulated Substance to the environment at any time during the Operational Life of the UST System; and

2.4.2.3 Be checked for evidence of a Release at least once every thirty (30) Days.

2.4.3 Secondary Containment systems may consist of one of the following:

2.4.3.1 A Cathodically Protected double walled steel Tank and double walled Piping; or

2.4.3.2 A double walled fiberglass reinforced plastic Tank and double walled Piping; or

2.4.3.3 A double walled fiberglass reinforced plastic composite Tank and double walled Piping.

2.5 Double Walled UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.5.1 Any of the acceptable UST System designs in Part B, subsection 2.3 may be fabricated in double walled construction in accordance with accepted engineering practice and industry standards.

2.5.2 A double walled Tank which is designed and manufactured in accordance with the following requirements satisfies the requirements for Secondary Containment in Part B, subsection 2.4 and the requirements for Release Detection set forth in Part B, subsection 2.9:

2.5.2.1 The interstitial space of the double walled Tank can be monitored for Releases; and

2.5.2.2 Outer jackets made of steel shall be coated as prescribed in subsection 2.6.2; and

2.5.2.3 There are no penetrations of any kind through the jacket to the Tank except top entry manholes and fittings; and

2.5.2.4 The outer jacket shall, at a minimum, cover the bottom eighty (80) percent of the UST; and

2.5.2.5 The jacket shall be able to contain a liquid or be able to contain a vacuum from the time of manufacture completion until the time of installation; and

2.5.2.6 All Tanks shall be equipped with a strike plate located beneath all Tank openings.

2.6 Cathodically Protected Steel UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.6.1 Cathodically Protected steel UST Systems shall be designed, constructed, installed and tested in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,* and the applicable industry standards, including the following:

2.6.1.1 API RP 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*.

2.6.1.2 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

2.6.1.3 UL 58, *Standard for Steel Underground Storage Tanks for Flammable and Combustible Liquids.*

2.6.1.4 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

2.6.1.5 STI, S*pecification for sti-P3® System for External Corrosion Protection of Underground Steel Storage Tanks.*

2.6.2 The Tank shall be coated with a suitable Dielectric Material in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

2.6.3 Field-installed Cathodic Protection systems shall be designed and installed in accordance with manufacturer's specifications, accepted engineering practice and the requirements listed in this Section.

2.6.4 Each Cathodic Protection system shall include sufficient monitoring stations which enable Owners and Operators to check on the adequacy of the Cathodic Protection system.

2.6.5 UST Systems that are protected by Sacrificial Anodes (sti-P3® Tanks) shall be electrically insulated from the Piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to Regulated Substances, additives, corrosive soils or groundwater.

2.6.6 UST Systems not protected by Sacrificial Anodes shall be factory coated with a material which will provide equivalent protection and corrosion resistance. The minimum finished coating thickness shall be consistent with applicable UL standards. Defects and any inadequacies in the coating shall be Repaired in accordance with the manufacturer's instructions and standard engineering practice.

2.7 Fiberglass Reinforced Plastic UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.7.1 Fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standard:

2.7.1.1 UL 1316, *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol Gasoline Mixtures.*

2.7.2 Fiberglass reinforced plastic UST Systems shall be of sufficient structural strength to withstand normal handling and underground use and shall be Compatible with the Regulated Substance and additives stored, corrosive soils and groundwater. Tank construction materials shall be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

2.7.3 Fiberglass reinforced plastic Tanks shall be tested for deflection in accordance with the manufacturer's requirements at the time of installation.

2.8 Steel with Non-Metallic Outer Shell UST Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.8.1 Steel fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

2.8.1.1 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

2.8.1.2 UL 58; *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

2.8.1.3 STI F-922, *Specification for Permatank®.*

2.8.1.4 STI F-894, ACT-100® *Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks.*

2.8.1.5 STI F-961, ACT -100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.*

2.8.1.6 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks.*

2.8.2 The coating shall not corrode under adverse underground electrolytic conditions and shall be Compatible with the Regulated Substance and additives stored.

2.8.3 The coating shall be factory inspected for air pockets, cracks, blisters pinholes and electrically tested by a ten thousand (10,000) volts holiday test performed over one hundred percent (100%) of the surface for coating short circuits or coating faults or in accordance with the manufacturer's specifications.

2.8.4 Any defects shall be Repaired in accordance with standard engineering practice and manufacturer's requirements to assure compliance with industry standards.

2.9 Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.9.1 General Requirements

2.9.1.1 Owners and Operators of UST Systems shall provide a method, or combination of methods of Release Detection on all UST Systems that:

2.9.1.1.1 Utilizes a method or methods capable of detecting a Release from any portion of the Tank and the connected underground Piping that routinely contain Regulated Substance at a minimum of once every thirty (30) Days; and

2.9.1.1.2 Is installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, including routine Maintenance and service checks for operability or running condition; and

2.9.1.1.3 Meets the performance standards for Release Detection in this Section, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. The method shall be capable of detecting the leak rate or quantity specified for Precision Testing, automatic Tank gauging, Line leak detectors, and Line tightness testing methods specified in these Regulations with a probability of detection of at least 0.95 and a probability of false alarm no greater than 0.05; and.

2.9.1.1.4 Is operational prior to Regulated Substance being placed in the UST System.

2.9.1.2 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Release Detection equipment or method shows indication of a Release.

2.9.1.3 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

2.9.2 Methods of Release Detection for Tanks Storing Regulated Substance

2.9.2.1 Owners and Operators shall monitor UST Systems for Releases through the use of inventory control procedures and at least one of the following Release Detection methods:

2.9.2.1.1 Interstitial Monitoring at a minimum of once every thirty (30) Days; or

2.9.2.1.2 Automatic Tank gauge performing Tank tightness testing in accordance with Part B, subsection 2.9.5.

2.9.3 Inventory Control Requirements for Tanks Storing Regulated Substance

2.9.3.1 Inventory control procedures shall meet the following requirements:

2.9.3.1.1 Every Owner and Operator shall perform inventory control procedures and shall maintain inventory control records for each Tank containing a Regulated Substance. Records shall be kept for each Tank, or cluster of Tanks if they are interconnected, and shall include measurements of bottom water levels, sales, use, deliveries, inventory on hand and losses or gains. Reconciliation of records shall be kept current, shall account for all variables which could affect an apparent loss or gain and shall be in accordance with generally accepted practices. The data shall be accumulated for each Day a Tank has Regulated Substance added or withdrawn but not less frequently than once every seven (7) Days, and shall include as a minimum:

2.9.3.1.1.1 Description and amount of Regulated Substance in the Tank measured in inches to the nearest one-eight (1/8) of an inch. The equipment used shall be capable of measuring the level of Regulated Substance over the full range of the Tank's height to the nearest one-eighth (1/8) of an inch. These measurements shall be converted from inches to gallons and these measurements and conversions shall be performed daily; and

2.9.3.1.1.2 Inputs and outputs of Regulated Substance in gallons recorded daily; and

2.9.3.1.1.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer’s specifications; and

2.9.3.1.1.4 Regulated Substance dispensing equipment is metered and recorded within the local standards for meter calibration or an accuracy of six (6) cubic inches for every five (5) gallons of substance withdrawn; and

2.9.3.1.1.5 Weekly assessment of the amount of water in UST Systems storing non-ethanol blended Regulated Substances excluding Consumptive Use Heating Fuel or Hazardous Substance or other UST Systems with prior Department approval. The measurement of the water level in the bottom of the Tank shall be made to the nearest one-eighth (1/8) of an inch. If the

measurement is two (2) inches or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements; and

2.9.3.1.1.6 Daily assessment of the amount of water in UST Systems storing ethanol blended Regulated Substance. The measurement of water level in the bottom of the Tank shall be made to the nearest one-eighth (1/8) of an inch.

2.9.3.1.1.7 For UST Systems storing ethanol blended Regulated Substance with a storage capacity of eight thousand (8000) gallons or less, if the measurement is one (1) inch or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements.

2.9.3.1.1.8 For UST Systems storing ethanol blended Regulated Substance with a storage capacity greater than eight thousand (8000) gallons, if the measurement is two (2) inches or more of water, the water shall be removed from the Tank within seven (7) days. Water shall be properly disposed in accordance with local, state and federal requirements.

2.9.3.1.1.9 Daily reconciliation of the amount of Regulated Substance added to and removed from the Tank. Recommended procedures for Tank inventory and reconciliation procedures are detailed in API RP 1621, *Bulk Liquid Stock Control at Retail Outlets*, and shall include at a minimum:

2.9.3.1.1.9.1 Losses or gains from each Day's inventory shall be reconciled at the end of each calendar month; and

2.9.3.1.1.9.2 For any Day in which there is a loss of five percent (5.0%) or more of the calculated daily inventory in gallons, or for any month in which there is a significant loss or gain of Regulated Substance that meets or exceeds one percent (1.0%) plus one hundred and thirty (130) gallons of the total monthly throughput, or any month in which there is an unexplainable consistent negative trend, the indicated Release investigation procedure in Part E of these Regulations shall be followed; and

2.9.3.2 Tanks equipped with automatic inventory control systems or continuously operating automatic in Tank gauging systems may use these devices to perform inventory reconciliation procedures.

2.9.3.3 All automatic systems utilized for performing inventory procedures shall comply with the preventative Maintenance program requirements of Part B, subsection 2.9.5.1.5.

2.9.3.4 Failure to maintain and reconcile inventory control records may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility at the expense of Owners and Operators.

2.9.4 Interstitial Monitoring Release Detection Requirements for Tanks Storing Regulated Substance

2.9.4.1 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 Regulated Substance and also meets one of the following requirements:

2.9.4.1.1 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 Regulated Substance.

2.9.4.1.2 For UST Systems with a secondary barrier within the Excavation Zone, the sampling or testing method can detect a Release between the UST System and the secondary barrier.

2.9.4.1.3 The secondary barrier around or beneath the UST System consists of artificially constructed Impervious Material so as to direct a Release of Regulated Substance to the monitoring point and permit its detection.

2.9.4.1.4 The barrier is Compatible with the Regulated Substance stored so that a Release from the UST System will not cause deterioration of the barrier allowing a Release to pass through undetected.

2.9.4.1.5 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.

2.9.4.1.6 Ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a Release can go undetected for more than thirty (30) Days.

2.9.4.1.7 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 are designed for use under such conditions.

2.9.4.1.8 For Tanks with an internally fitted liner, an automated device may be used to detect a Release between the inner wall of the Tank and the liner, and the liner shall be Compatible with the substance stored.

2.9.4.2 At a minimum of once every thirty (30) Days, Owners and Operators shall inspect all interstitial monitoring devices utilized for Release Detection for evidence of a Release from the UST System and shall record the results.

2.9.4.3 The interstitial monitoring equipment shall be capable of producing a record of Release Detection monitoring results. Original test records or equivalent third party test reports that duplicate the ATG console settings and test programming shall be made available upon request.

2.9.4.4 Owners and Operators shall maintain records of the interstitial Release monitoring results for three (3) years.

2.9.4.5 Owners and Operators shall have all interstitial monitoring equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. The inspection shall at a minimum include:

2.9.4.5.1 Inspection of the console for printer operation if so equipped; and

2.9.4.5.2 Verification of the system setup values and battery backup; and

2.9.4.5.3 Verification of the test programming; and

2.9.4.5.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

2.9.4.5.5 Inspection and testing of all probes and interstitial sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper sensor operation; and

2.9.4.5.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

2.9.4.5.7 Correction of any problems found as a result of the required inspection.

2.9.4.6 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment for three (3) years and any Repairs performed as a result of the inspection for their time of ownership or operation of the UST system.

2.9.5 Automatic Tank Gauging Release Detection Requirements for Tanks Storing Regulated Substance

2.9.5.1 Tank tightness testing using automatic Tank gauging (ATG) shall meet the following requirements:

2.9.5.1.1 The ATG equipment can detect a 0.2 gallon per hour leak rate from any portion of the Tank that routinely contains Regulated Substance; and

2.9.5.1.2 The ATG equipment shall be capable of producing a record of Release Detection test results; and

2.9.5.1.3 At a minimum of once every thirty (30) Days the ATG equipment shall perform a Release Detection test for each Tank and shall produce a record of each such test. Original test records or equivalent third party Release Detection test reports that duplicate the ATG console settings and test programming shall be made available upon request; and

2.9.5.1.4 If used for inventory control, the ATG equipment shall be able to conduct inventory control in accordance with Part B, subsection 2.9.3.

2.9.5.1.5 Owners and Operators shall maintain a record of all Release Detection tests performed by the ATG equipment for three (3) years.

2.9.5.2 Owners and Operators shall have all ATG equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. The inspection shall at a minimum include:

2.9.5.2.1 Inspection of the ATG console for proper printer operation if so equipped; and

2.9.5.2.2 Verification of the system setup values and battery backup; and

2.9.5.2.3 Verification of the test programming; and

2.9.5.2.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

2.9.5.2.5 Inspection and testing of the magnetostrictive probes and sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

2.9.5.2.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

2.9.5.2.7 Correction of any problems found as a result of the required inspection.

2.9.5.2.8 Owners and Operators shall maintain records of the annual inspections of the ATG and any Repairs performed as a result of the inspection for three (3) years.

2.9.6 Observation Tube Release Detection Requirements for Tanks Storing Regulated Substance

2.9.6.1 Observation Tubes shall not be used to comply with the Release Detection requirements of Part B, subsection 2.9 after January 1, 2013.

2.9.7 Tank Tightness Test Release Detection Requirements for Tanks Storing Regulated Substance

2.9.7.1 Owners and Operators implementing this Release Detection option shall conduct a separate tightness test for each UST System. The test shall be conducted at least once every twelve (12) months until December 22, 1998 or for (10) years after UST installation, whichever is later. Tank tightness testing shall not be utilized as a primary method of Release Detection after December 31, 2008.

2.9.7.2 All testing of UST Systems shall be conducted in accordance with the Precision Test methods and procedures specified in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*, or other test approved by the Department which is of equivalent or superior accuracy.

2.9.7.3 Testing of UST Systems shall utilize a method capable of detecting a Release of a Regulated Substance at a rate of 0.1 gallons per hour with a probability of detection of 0.95 and a probability of false alarm of 0.05 from any part of the Tank which routinely contains Regulated Substance. These methods are limited to those tests that account for the following, if applicable:

2.9.7.3.1 The presence of vapor pockets;

2.9.7.3.2 The expansion or contraction of the Regulated Substance, which include any density considerations;

2.9.7.3.3 Temperature stratification in the Tank;

2.9.7.3.4 Evaporation;

2.9.7.3.5 Pressure variations in the Tank;

2.9.7.3.6 Deflection of the Tank ends; and

2.9.7.3.7 The location of the water table.

2.9.7.4 These tests shall be conducted by a person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer. The Person performing the test shall certify that the test procedure utilized takes into account the variables specified in Part B, subsection 2.9.7.3.

2.9.7.5 Owners and Operators shall retain a copy of the results of the Tank tightness tests for three (3) years.

2.9.7.6 If the UST System fails NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases,* criteria Owners and Operators and the UST System test contractor shall report tank test failure to the Department within twenty-four (24) hours and shall submit a copy of the test results to the Department within seven (7) Days of the test failure. The UST System Tank tightness test failure shall be investigated in accordance with Part E, Section 2.0. The test results shall include at a minimum the following information:

2.9.7.6.1 The procedures used including any deviations from those recommended by the developer of the test procedure for the Release Detection method; and

2.9.7.6.2 The name of the company performing the test; and

2.9.7.6.3 The method used; and

2.9.7.6.4 The results of the test.

2.9.8 Monitor Well Release Detection Requirements for Tanks Storing Regulated Substance

2.9.8.1 Monitor Wells shall not be used to comply with the Release Detection requirements of Part B, subsection 2.9 after January 1, 2013.

2.9.9 Vadose Zone Vapor Detection Tubes Release Detection Requirements for Tanks Storing Regulated Substance

2.9.9.1 Vadose Zone Vapor Detection Tubes shall not be used to comply with the Release Detection requirements of Part B, subsection 2.9 after January 1, 2013.

2.9.10 U-Tube Release Detection Requirements for Tanks Storing Regulated Substance

2.9.10.1 U Tubes shall not be used to comply with the Release Detection requirements of Part B, subsection 2.9 after January 1, 2013.

2.9.11 Tanks Statistical Inventory Reconciliation (SIR) Release Detection Requirements for Tanks Storing Regulated Substance

2.9.11.1 Statistical Inventory Reconciliation (SIR) Release Detection methods shall be based on the application of statistical principles to inventory data similar to those described in Part B, subsection 2.9.3 and shall meet the following requirements:

2.9.11.1.1 Report a quantitative result with a calculated leak rate in accordance with Part B, subsections 2.9.7.3 and 2.19.3.1;

2.9.11.1.2 Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within thirty (30) Days;

2.9.11.1.3 Use a threshold that does not exceed one-half the minimum detectable leak rate; and

2.9.11.1.4 The SIR reports shall be received by the Department within the thirty (30) Day monitoring period.

2.9.11.1.4.1 Any test results which are reported as a failure or inconclusive shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0. The Department will make a determination whether to prohibit continued use of SIR as a Release Detection method after two (2) consecutive failures or inconclusive test results.

2.9.11.1.5 Qualitative SIR Release Detection methods will not be accepted after January 11, 2020.

2.9.11.1.6 Quantitative SIR Release Detection methods shall be third party certified.

2.9.11.1.7 SIR methods are not approved for UST Systems utilizing master/satellite Dispenser Systems after January 11, 2020.

2.10 Anchoring Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.10.1 Support and anchorage shall be provided for all installations to avoid Tank flotation. Any of the following anchoring methods can be used to meet this requirement and shall be completed in accordance with the PEI, RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems:*

2.10.1.1 Reinforced concrete deadmen anchors; or

2.10.1.2 Bottom hold down pad which consists of eight (8) inches of reinforced concrete that extends eighteen (18) inches beyond Tank sides and twelve (12) inches beyond each end; or

2.10.1.3 Reinforced concrete slab over Tank.

2.10.2 All exposed metallic components of hold down systems shall be Electrically Isolated and Cathodically Protected when the hold down system is required by the Department; adequate bed of backfill shall be provided between the Tank and concrete.

2.11 Backfill Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.11.1 Backfill material shall consist of sand, crushed rock or pea gravel. The material shall be clean, washed, inert, free flowing, homogeneous, well granulated, non corrosive, and free of debris, rock, ice, snow or organic material. Particle length of crushed rock or pea gravel shall be no more than one-eighth (1/8) to three-fourths (3/4) inch in size. Backfill material shall comply with the manufacturer's specifications. Mixing of backfill with native soil or foreign objects is prohibited.

2.11.2 The backfill depth shall be consistent with the requirements in PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems*.

2.12 Requirements for Installation of UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance In An Existing UST Facility

2.12.1 A new UST System installed in or near an existing or previous UST System shall meet the requirements of Part B, Section 1.0.

2.13 Tank and Piping Installation Inspection and Testing Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.13.1 Once on site all UST Systems materials and equipment shall be inspected for flaws, surface cracks, holes, large scrapes, blisters, indentations and other indications of damage. All defects and Repairs to the UST System shall be recorded and submitted together with a site completion report to the Department.

2.13.2 All Tank(s) shall be air pressure tested according to the manufacturer's specifications prior to installation of the Tank(s) into the excavation. For single walled Tank(s), the installer shall remove, dope and re install all factory plugs. The installer shall soap the exterior, particularly its seams and fittings and pressure test the Tank(s) using the manufacturer's specifications to watch for bubbles. For double walled Tanks testing shall be conducted according to the manufacturer's recommendations and accepted engineering practices.

2.13.3 After installation of the Tank and integral Piping is completed, the entire UST System shall be tested in accordance with current industry standards and practices and in the following manner to prove tightness prior to the initial use of the UST System:

2.13.3.1 All testing of UST Systems shall be accomplished by the Precision Test method described in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases,* or other test approved by the Department which is of equivalent or superior accuracy.

2.13.3.2 All testing of UST Systems shall be able to account for the effects of thermal expansion or contraction of the Regulated Substances, vapor pockets, Tank deformation, evaporation or condensation, and the location of the water table.

2.13.3.3 These tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer and with current industry standards and practices.

2.14 General Piping Installation Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.14.1 The Piping layout shall be designed to minimize crossed lines and interference with conduit and other UST System components. If crossing of lines is unavoidable, adequate clearance shall be provided to prevent contact.

2.14.2 When rigid Piping is used, flexible connector(s) shall be installed at the Tank end of each Regulated Substance Pipe, vent Pipe and vapor recovery Pipe as well as at the base of each Dispenser and vent riser on all new installations. Double elbow swing joints are prohibited. All double elbow swing joints shall be replaced with flexible connectors by January 1, 2011.

2.14.3 All Regulated Substance, vent and vapor return Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot.

2.14.4 The Pipe joints shall be cut accurately and deburred to provide Liquid Tight seals.

2.14.5 All underground metal Pipe, fittings, flexible connectors, joints, and Pipes shall be coated or wrapped and shall have Cathodic Protection or otherwise be isolated from contact with the soil.

2.14.6 Manifolding of Regulated Substance Piping under dispensers is prohibited. Existing UST Systems with manifolding under Dispensers shall be replaced using one of the methods specified in Part B, subsection 2.14.7 after January 11, 2020.

2.14.7 When manifolding USTs to one Regulated Substance Line, the Line is required to be manifolded at the Tank end. The two methods of manifolding at the Tank end allowed by the Department are:

2.14.7.1 Siphon system between two or more USTs; or

2.14.7.2 Manifolding of submersible turbine pumps.

2.15 UST Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.15.1 Underground Piping shall be protected from corrosion in accordance with accepted corrosion engineering practices and shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

2.15.1.1 NFPA 30, *Flammable and Combustible Liquids Code*.

2.15.1.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

2.15.1.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

2.15.1.4 API RP 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.*

2.15.1.5 NACE RP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems.*

2.15.1.6 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

2.15.1.7 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

2.15.1.8 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

2.15.2 Underground Piping systems shall be designed, constructed, and installed in a manner which will permit periodic tightness testing of the entire Piping system without the need for extensive excavation and disassembly.

2.15.3 Acceptable designs for Underground Piping construction include Cathodically Protected metallic, fiberglass reinforced plastic and flexible plastic Piping.

2.15.4 Use of metal Piping without either Sacrificial Anodes or impressed current Cathodic Protection is prohibited.

2.16 Metal Piping Design Requirements for UST Systems Storing Regulated Substance excluding Heating Fuel or Hazardous Substance

2.16.1 All metal Piping shall be coated or wrapped, and Cathodically Protected in the following manner:

2.16.1.1 The Piping is coated with a suitable Dielectric Material; and

2.16.1.2 Field installed Cathodic Protection systems are designed and installed in accordance with accepted engineering practice and standards established under this Section; and

2.16.1.3 Cathodically Protected Piping systems of the Sacrificial Anode type shall be designed and installed to permit measurement of structure to soil potential six (6) months after installation and at least once every twelve (12) months thereafter. If inadequate Cathodic Protection is indicated, the cause shall be determined, and necessary Repairs made in accordance with accepted engineering practices and one of the Standards contained in this Section within sixty (60) Days of the test; and

2.16.1.4 Impressed current systems shall be designed to allow determination of current operating status. The impressed current source cannot be de energized at any time including periods when the Facility is closed (except during power failures or during service work on the storage systems or the impressed current Cathodic Protection system), and it shall be equipped with a continuously operating meter to show that the system is working; and

2.16.1.5 Where a Sacrificial Anode or impressed current system is used, a monitor station to check on the adequacy of the Cathodic Protection system shall be installed and kept in proper working condition. If at any time the monitor station shows that the electrical current necessary to prevent corrosion is not being maintained the cause shall be determined and necessary Repairs made in accordance with accepted engineering practices and one of the Standards contained in this Section within sixty (60) Days of the failure, and the Piping shall be tested for tightness in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*; and

2.16.1.6 Except where Cathodic Protection is provided by impressed current, underground Piping systems shall have dielectric bushings, washers, sleeves or gaskets installed to electrically isolate the Piping system from the Tank and the Dispenser. These dielectric connectors shall be chemically Compatible with Regulated Substances, additives, corrosive soils and groundwater; and

2.16.1.7 Cathodic Protection systems shall be maintained, operated, tested and Repaired in accordance with the requirements of Part B, subsection 2.25.

2.17 Fiberglass Reinforced Plastic and Flexible Plastic Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.17.1 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the manufacturer's specifications and the following industry standards, as applicable:

2.17.1.1 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

2.17.1.2 UL Standard 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe Connection Fittings for Petroleum Products and LP-Gas.*

2.17.1.3 NFPA 30, *Flammable and Combustible Liquids Code*.

2.17.1.4 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

2.17.1.5 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

2.17.1.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

2.17.2 The construction materials, joints and joint adhesives of all fiberglass reinforced plastic and flexible plastic Pipes shall be Compatible with the Regulated Substance and additives stored, soil and groundwater.

2.17.3 Pipes, fittings and adhesives shall be designed, fabricated, and factory tested in accordance with generally accepted structural, material and performance standards for underground Piping systems.

2.18 Suction Piping Design Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.18.1 Suction Piping shall operate at less than atmospheric pressure and shall be designed, constructed, and installed to meet the requirements of Part B, subsections 2.18.1.1 or 2.18.1.2:

2.18.1.1 Safe suction Piping systems shall be designed and constructed in accordance with the following requirements:

2.18.1.1.1 The below grade Piping shall be constructed so that if suction is released the contents of the Pipe will drain back into the Tank; and

2.18.1.1.2 Only one (1) check valve shall be included in each suction Pipe; and

2.18.1.1.3 The check valve shall be located directly below and as close as practical to the suction pump; or

2.18.1.2 Suction Piping systems with a foot valve (U.S. Suction) shall be designed and constructed in accordance with the following requirements:

2.18.1.2.1 The below grade Piping shall be constructed so that the Piping slopes back to the Tank; and

2.18.1.2.2 A foot valve is installed at the Tank.

2.19 General Release Detection Requirements for UST Piping for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.19.1 Owners and Operators shall equip all underground Piping that routinely contains Regulated Substances with a method, or combination of methods of Release Detection that can detect a Release from any portion of the underground Piping that routinely contains Regulated Substance.

2.19.2 Statistical Inventory Reconciliation (SIR) methods shall be in accordance with Part B, subsection 2.9.11.

2.19.3 Release Detection methods not specified in this Section will be considered an alternative by the Department. A written request detailing the method or combination of methods proposed shall be submitted to the Department prior to installation for approval. Alternative methods shall meet the following requirements:

2.19.3.1 The method can detect a 0.1 gallon per hour leak rate or a Release of seventy-five (75) gallons within a month with a probability of detection of 0.95 or greater and a probability of false alarm of 0.05 or less; or

2.19.3.2 The method or a combination of methods or devices can detect a Release as effectively as any of the Release Detection methods allowed in Part B, subsection 2.20. If the method or a combination of methods or devices is approved, Owners and Operators shall comply with any conditions imposed by the Department on its use to ensure the protection of human health, safety or the environment.

2.19.4 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Piping Release Detection equipment or method shows indication of a Release.

2.19.5 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

2.20 Pressurized Piping Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.20.1 Line Leak Detector and Line Tightness Testing Requirements

2.20.1.1 Underground Piping that conveys Regulated Substances under pressure shall be equipped with an automatic Line leak detector.

2.20.1.2 The automatic Line leak detector shall alert Owners and Operators to the presence of a Release of a Regulated Substance in accordance with subsection 2.20.1.2.1 or 2.20.1.2.2.

2.20.1.2.1 Mechanical automatic line leak detectors shall be capable of restricting the flow of the Regulated Substance.

2.20.1.2.2 Electronic automatic line leak detectors shall be capable of restricting the flow of the Regulated Substance. Electronic automatic line leak detectors may be configured to shut down the UST System and trigger an audible or visual alarm.

2.20.1.3 Mechanical and Electronic automatic Line leak detectors shall be capable of reacting to leaks of three (3) gallons per hour at ten (10) pounds per square inch Line pressure within one (1) hour.

2.20.1.4 Owners and Operators shall conduct an annual test of the operation of the automatic Line leak detector while installed in the UST System and under normal operating conditions. All Mechanical and Electronic automatic Line leak detectors shall pass a function test at least once every twelve (12) months at three (3) gallons per hour (gph) at ten (10) pounds per square inch Line pressure within one (1) hour.

2.20.1.5 For UST Systems with single walled Piping or double walled Piping and no interstitial monitoring, Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, primary Piping only, in accordance with NFPA 329, Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.

2.20.1.6 For UST Systems with double walled Piping and interstitial monitoring, Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, including the primary and secondary Piping, in accordance with NFPA 329, Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.

2.20.1.7 Owners and Operators of UST Systems with underground pressurized Piping systems shall use a Piping tightness test method designed to detect a Release from any portion of the underground Piping system that routinely contains Regulated Substances.

2.20.2 Piping Interstitial Monitoring Requirements

2.20.2.1 Owners and Operators of UST Systems with underground pressurized Piping systems constructed of double wall design may utilize continuous interstitial monitoring systems to comply with the annual Piping tightness test requirements in Part B, subsections 2.20.1.6 and 2.20.1.7 if the following requirements are met:

2.20.2.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Regulated Substance; and

2.20.2.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring equipment record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

2.20.2.1.3 Owners and Operators shall maintain records of the interstitial Release Detection records for three (3) years; and

2.20.2.1.4 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part B, subsection 2.28; and

2.20.2.1.5 All Containment Sumps shall comply with the testing and monitoring requirements of Part B, subsection 2.26.

2.20.2.2 Continuous interstitial monitoring systems that comply with Part B, subsection 2.20.2.1 may be utilized to meet the annual Piping tightness test requirements of Part B, subsections 2.20.1.6 and

2.20.1.7 after notification to the Department. This allowance shall not apply to UST Systems approved by the Department in accordance with Part B, subsection 2.4.1.

2.20.2.3 When there is a failure of any annual Piping tightness test, conducted voluntarily or to meet the requirements of these Regulations, the test failure shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

2.21 Suction Piping Release Detection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.21.1 Release Detection is not required for suction Piping that is designed and constructed to meet the requirements of Part B, subsection 2.18.1.1.

2.21.2 Owners and Operators of suction Piping that is designed and constructed in accordance with subsection 2.18.1.2 shall conduct a Line tightness test a minimum of once every three (3) years in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*; or

2.21.3 Owners and Operators of UST Systems with underground suction Piping systems constructed of double wall design may utilize continuous interstitial monitoring systems to comply with Piping Release Detection requirements of subsection 2.19 and the Line tightness testing requirements of Part B, subsection 2.21.2 if the following requirements are met:

2.21.3.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Regulated Substance; and

2.21.3.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring equipment record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

2.21.3.3 Owners and Operators shall maintain records of the interstitial Release Detection records for three (3) years; and

2.21.3.4 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part B, subsection 2.28; and

2.21.3.5 All Containment Sumps shall comply with the testing and monitoring requirements of Part B, subsection 2.26.

2.22 Spill Prevention Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.22.1 No Person shall construct, install, use or maintain any UST System without providing a reliable means of ensuring that Releases due to spilling do not occur.

2.22.2 To prevent spilling associated with Regulated Substance transfer to the UST System, Owners and Operators shall comply with the requirements of the following industry standards:

2.22.2.1 NFPA 30, *Flammable and Combustible Liquids Code*; or

2.22.2.2 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids;* or

2.22.2.3 API RP 1621, *Bulk Liquid Stock Control at Retail Outlets.*

2.22.3 Owners and Operators shall equip UST Systems with an impervious spill containment device that forms a Liquid Tight seal around the fill Pipe. The spill containment device shall consist of one of the following:

2.22.3.1 Impervious Materials which form a seal around the UST fill Pipe with an optional drain leading to an overfill collection device; or

2.22.3.2 An impervious container surrounding the fill Pipe which will collect any overfill or spill and will allow the Regulated Substance to drain back into the UST when there is sufficient ullage space.

2.22.4 Owners and Operators shall immediately upon discovery remove water, Regulated Substance or debris that accumulates in the spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state, and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

2.22.5 All reasonable precautions shall be taken to prevent UST overfilling, spilling or dripping.

2.22.6 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 2.22.8.

2.22.7 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 2.22.8 and the interstitial sensors shall be tested in accordance with Part B, subsection 2.28.

2.22.8 Hydrostatic testing procedures shall meet the following requirements:

2.22.8.1 For post-construction hydrostatic testing, the spill bucket shall be completely filled with liquid and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

2.22.8.2 For periodic hydrostatic testing, the spill bucket shall be completely filled with liquid and held for one (1) hour. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

2.22.9 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

2.22.10 Owners and Operators shall report, investigate and clean up any spills in accordance with Part E of these Regulations.

2.23 Overfill Prevention Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.23.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means ensuring that Releases due to overfilling do not occur.

2.23.2 The Person In Charge of the transfer of Regulated Substance to the Tank shall adhere to proper safety precautions and procedures for transfer as found in NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids* or API RP 1621, *Bulk Liquid Stock Control at Retail Outlets* and shall comply with the following:

2.23.2.1 The Person In Charge of the transfer operation shall first check the UST to ensure that the volume available in the UST is greater than the volume of Regulated Substance to be transferred to the UST before the transfer is made; and

2.23.2.2 During the transfer, the Person In Charge shall continuously monitor the entire transfer operation to prevent an Overfill Release; and

2.23.2.3 All deliveries and measurements shall be made through a drop tube that extends to no more than 6.0 inches from the Tank bottom and in accordance with manufacturer's specifications; and

2.23.2.4 At the conclusion of the transfer, the Person in Charge shall collect any Regulated Substance which remains in the transfer hose and shall ensure it is properly managed and does not reach the environment; and

2.23.2.5 The Person in Charge shall take all precautions to prevent spilling and dripping.

2.23.3 Owners and Operators shall install and maintain overfill prevention equipment that shall:

2.23.3.1 Automatically achieve partial shut off of flow into the UST when the UST is ninety-five percent (95%) full and complete shut off of flow at ninety-eight percent (98%) full; or

2.23.3.2 Alert the transfer operator when the UST is no more than ninety percent (90%) full by triggering a high level audible and visual alarm.

2.23.3.3 Vent Line flow restrictors (ball float valves) shall not be installed for overfill prevention after January 11, 2020.

2.23.3.4 Existing vent Line flow restrictors (ball float valves) shall be removed not later than January 11, 2023 unless the following condition exists:

2.23.3.4.1 Vent Line flow restrictors (ball float valves) may remain in place at the ninty percent (90%) Tank capacity level provided the overfill prevention equipment automatically achieves partial shut off of flow into the UST when the UST is eighty-five percent (85%) full and complete shut off of flow at eighty-eight percent (88%) full.

2.23.3.5 Vent Line flow restrictors (ball float valves) shall not be used in conjunction with other methods of overfill prevention method specified in Part B, subsection 2.23.3.2.

2.23.4 UST Systems that receive pressurized deliveries require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention or an automatic flow shut-off valve designed for pressurized deliveries.

2.23.5 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

2.23.6 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. At a minimum, the inspection shall ensure that overfill prevention equipment is functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part B, subsection 2.23.3.

2.24 Fill Line Protection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.24.1 Owners and Operators shall clearly mark all fill lines for UST Systems to indicate the size of the Tank and the type of Regulated Substance stored. These markings shall be as follows:

2.24.1.1 A label or permanent tag at the fill connection which states the size of the UST and the specific type of Regulated Substance stored; and

2.24.1.2 A color symbol system shall be implemented according to the following requirements:

2.24.1.2.1 Fill and vapor recovery covers shall be marked consistent with API RP 1637, Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals or API IP 1542, Identification Markings for Dedicated Aviation Fuel Manufacturing and Distribution Facilities, Airport Storage and Mobile Fuel Equipment; and

2.24.1.2.2 A different color symbol shall be used for each type of Regulated Substance or grade of substance being stored at the Facility.

2.24.2 Pipes and other openings not used for transfer of Regulated Substance at the storage Facility shall not be painted any color which would be associated with the color symbol designated for marking the Regulated Substance stored at the Facility. It is particularly important that openings with access to soil and ground water not be confused with Regulated Substance fill Lines.

2.25 Sacrificial Anode and Impressed Current Cathodic Corrosion Protection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.25.1 General Requirements

2.25.1.1 Owners and Operators of steel UST systems with corrosion protection systems shall install, operate and maintain the system in accordance with the following industry standards:

2.25.1.1.1 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*; and

2.25.1.1.2 NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems;* and

2.25.1.1.3 NACE International SP 0169, Control of External Corrosion on Underground or Submerged Metallic Piping Systems; and

2.25.1.1.4 NFPA 30, *Flammable and Combustible Liquids Code*; and

2.25.1.1.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

2.25.1.2 Owners and Operators of steel UST Systems with corrosion protection systems shall maintain and operate the corrosion protection system to continuously provide corrosion protection to the metal components of the UST System that routinely contain a Regulated Substance and are in contact with the ground to ensure that Releases due to corrosion are prevented for the life of the UST System.

2.25.1.3 Owners and Operators shall ensure the integrity of the UST System utilizing one of the following methods prior to the addition of a Cathodic Protection system to an existing UST System:

2.25.1.3.1 The Tank shall be internally inspected to ensure that the Tank is structurally sound and free of corrosion holes prior to installing the Cathodic Protection system; or

2.25.1.3.2 The Tank has been installed for less than ten (10) years and is monitored monthly for Releases in accordance with the requirements of an approved Release Detection method in Part B, subsection 2.9; or

2.25.1.3.3 The Tank has been installed for less than ten (10) years and is assessed for corrosion holes by conducting two (2) Precision Tests that meet the requirements of Part B, subsection 2.9.7. The first Precision Test shall be conducted prior to installing the Cathodic Protection system. The second Precision Test shall be conducted between three (3) and six (6) months following the first operation of the Cathodic Protection system; or

2.25.1.3.4 A third party approved integrity assessment method approved by the Department.

2.25.2 Sacrificial Anode Cathodic Protection System Operation and Maintenance Requirements

2.25.2.1 Owners and Operators shall test all UST Systems equipped with Sacrificial Anode Cathodic Protection systems for proper operation using standard corrosion engineering practices and in accordance with the following requirements:

2.25.2.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,* NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*, and the manufacturer's specifications, and shall include the following:

2.25.2.1.1.1 A minimum of three (3) voltage readings equally spaced along the center line, including both ends and center, for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) voltage readings equally spaced along the center line, including both ends, center and two intermediate locations, for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

2.25.2.1.1.2 A minimum of one (1) voltage reading for every ten (10) feet of Piping.

2.25.2.2 All Sacrificial Anode Cathodic Protection systems that protect UST System components shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) months of installation and at least once every twelve (12) months thereafter.

2.25.2.3 The Sacrificial Anode Cathodic Protection system shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) weeks after underground work is performed at or near a site with a Sacrificial Anode Cathodic Protection system and once every twelve (12) months thereafter.

2.25.2.4 Owners and Operators shall Repair or replace the Sacrificial Anode Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the requirements of Part B, subsection 1.6 if the Sacrificial Anode Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the corrosion protection system.

2.25.2.5 UST System Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of a Sacrificial Anode Cathodic Protection system.

2.25.2.6 The Department shall approve, in writing, all Cathodic Protection repair or Retrofit plans prior to work commencing.

2.25.2.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

2.25.2.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the Sacrificial Anode Cathodic Protection system:

2.25.2.8.1 Results of one of the following:

2.25.2.8.1.1 The two (2) most recent Sacrificial Anode Cathodic Protection system tests including the failed test, or

2.25.2.8.1.2 The results of an internal assessment, or

2.25.2.8.1.3 The results of a third party approved integrity assessment; and

2.25.2.8.2 Records of the Tank Release Detection method from the date of the most recent passed Sacrificial Anode Cathodic Protection test.

2.25.2.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

2.25.2.10 The use of alternate methods of monitoring shall be those described in NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, and shall only be used with prior written approval from the Department.

2.25.2.11 Owners and Operators shall maintain a record of the operation of Sacrificial Anode Cathodic Protection systems to demonstrate compliance with the requirements of this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

2.25.2.11.1 The results of all tests and inspections of the Sacrificial Anode Cathodic Protection system.

2.25.2.12 Impressed current Cathodic Protection systems shall not be utilized as a Repair, Upgrade or Retrofit for a failed Sacrificial Anode Cathodic Protection system after January 11, 2008.

2.25.3 Impressed Current Cathodic Protection Operation and Maintenance Requirements

2.25.3.1 Owners and Operators shall test all UST Systems equipped with impressed current Cathodic Protection systems for proper operation using standard corrosion engineering practices in accordance with the following requirements:

2.25.3.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,* NACE TM0101*, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,* and the manufacturer's specifications and shall include the following:

2.25.3.1.1.1 A minimum of three (3) instant off voltage readings along the center line for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) instant off voltage readings along the center line for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

2.25.3.1.1.2 A minimum of one (1) instant off voltage reading for every ten (10) feet of Piping.

2.25.3.2 Owners and Operators shall have all impressed current Cathodic Protection systems that protect underground Facility components tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) months of installation and at least once every twelve (12) months thereafter.

2.25.3.3 Owners and Operators shall have all impressed current Cathodic Protection systems tested by an individual certified by a nationally recognized industry standard setting organization and in accordance with Department standards within six (6) weeks after underground work is performed at or near a site with an impressed current Cathodic Protection system and at least once every twelve (12) months thereafter.

2.25.3.4 Owners and Operators shall Repair or replace the impressed current Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* if the impressed current Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the impressed current corrosion protection system.

2.25.3.5 Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of an impressed current Cathodic Protection system.

2.25.3.6 The Department shall approve, in writing, all impressed current Cathodic Protection system Repair or Retrofit plans prior to work commencing.

2.25.3.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

2.25.3.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the impressed current Cathodic Protection system:

2.25.3.8.1 Results of one of the following:

2.25.3.8.1.1 The two (2) most recent impressed current Cathodic Protection system tests including the failed test, or

2.25.3.8.1.2 The results of an internal assessment, or

2.25.3.8.1.3 The results of a third party approved integrity assessment; and

2.25.3.8.2 Records of the Tank Release Detection method from the date of the most recent passed impressed current Cathodic Protection test; and

2.25.3.8.3 Records of required rectifier readings from the date of the most recent passed impressed current Cathodic Protection test.

2.25.3.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

2.25.3.10 The impressed current source cannot be de energized at any time including periods when the Facility is closed except during power failures or during service work on the UST Systems or the impressed current Cathodic Protection system.

2.25.3.11 The use of alternate methods of testing shall be those described in NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,* and shall only be used with prior written approval from the Department.

2.25.3.12 Owners and Operators shall record all rectifier readings at least once every thirty (30) Days. If the monthly rectifier reading demonstrates the impressed current Cathodic Protection is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations the procedures in Part B, subsection 2.25.3.4 shall be followed.

2.25.3.13 Owners and Operators shall have all impressed current Cathodic Protection systems inspected once every twelve (12) months by an individual certified by a nationally recognized industry standard setting organization and in accordance with Department standards. Inspection shall at a minimum include a check for electrical shorts, ground connections, meter accuracy, and circuit resistance. The effectiveness of isolating devices, continuity bonds, and insulators shall be evaluated during the annual surveys.

2.25.3.14 Owners and Operators shall maintain a record of the operation of impressed current Cathodic Protection systems to demonstrate compliance with the performance standards in this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

2.25.3.14.1 The results of all tests and inspections of the impressed current Cathodic Protection system; and

2.25.3.14.2 The rectifier readings as required in Part B, subsection 2.25.3.12.

2.26 Containment Sump Testing Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.26.1 When a sump with sensor is used to comply with the Piping Release Detection requirements of Part B, subsections 2.19, 2.20 or 2.21, the Dispenser, Tank top, transition and any other Containment Sump of a single wall design shall be Liquid Tight and shall be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part B, subsection 2.26.3 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

2.26.2 All Dispenser, Tank top, transition and any other Containment Sumps not utilized as part of a Release Detection system and of single wall design shall be Liquid Tight and shall be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part B, subsection 2.26.3 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

2.26.3 All Dispenser, Tank top, transition and any other Containment Sump tightness testing shall be performed in accordance with the manufacturer's specifications or as directed by the Department. Hydrostatic testing procedures shall meet the following requirements:

2.26.3.1 For post-construction hydrostatic testing, the Containment Sump shall be completely filled and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

2.26.3.2 For periodic hydrostatic testing, the Containment Sump shall be filled to a minimum of four (4) inches above the highest penetration fitting or sump sidewall seam, whichever is higher. The liquid level shall be no less than twenty-four (24) inches from the bottom of the sump and held for a

minimum of one (1) hour. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

2.26.3.3 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state and federal requirements.

2.26.4 Owners and Operators shall immediately upon discovery remove water, Regulated Substance or debris that accumulates in any Containment Sump. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements.

2.27 Containment Sump Requirements for Non-Liquid Tight Access Structures for UST Systems Storing Regulated Substance Installed or Existing Prior to January 11, 2008, Excluding Consumptive Use Heating Fuel or Hazardous Substance

2.27.1 All Dispenser, Tank top, transition and any other non-Liquid Tight access structures shall be prohibited after December 31, 2025. Containment Sumps shall be installed in accordance with Part B, subsection 2.29 prior to and no later than December 31, 2025.

2.28 Testing and Monitoring Procedures for Sump Sensors and Interstitial Sensors for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.28.1 All sensors utilized for Release Detection shall be equipped with an automatic audible alert system and shall shut down the UST System in the event of an alarm.

2.28.2 Owners and Operators shall perform a functionality test of all sump and interstitial sensors once every twelve (12) months in accordance with the manufacturer's specifications or as directed by the Department to verify proper sensor operation.

2.28.3 All sensors installed in a sump for the purpose of detecting a Release from the UST System shall be installed directly on the bottom at the lowest point of the sump and in accordance with the manufacturer's specifications such that the sensor is capable of detecting any accumulation of Regulated Substance.

2.28.4 All sensors utilized for Release Detection shall be monitored for releases at a minimum of once every thirty (30) Days.

2.29 Repair, Retrofit and Upgrade Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.29.1 All Retrofits and Upgrades to existing UST Systems shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

2.29.1.1 All Repairs that require post-construction testing shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

2.29.1.2 All Repairs not meeting the requirements of Part B, subsection 2.29.1.1, shall meet the applicable design, installation, Maintenance and operational standards in Part B, Section 1.0 of these Regulations.

2.29.2 Owners and Operators shall report any unusual operating conditions to the Department in accordance with the requirements of Part E, subsection 1.2 of these Regulations.

2.29.3 All equipment installed after January 11, 2008 shall be installed, operated and maintained such that manufacturer's warranties are not voided.

2.29.4 Owners and Operators shall ensure that Repairs, Retrofits and Upgrades will prevent Releases due to structural failure or corrosion as long as the UST System is used to store Regulated Substance.

2.29.5 Owners and Operators shall test the Cathodic Protection system in accordance with Part B, subsection 2.25 within six (6) weeks and once every twelve (12) months thereafter following the Repair of any Cathodically Protected UST System to ensure it is operating properly.

2.29.6 Owners and Operators shall maintain records for each Repair, Retrofit or Upgrade for their time of ownership or operation of the UST System.

2.29.7 After any Repair, Retrofit or Upgrade to an UST System, Owners and Operators shall have the applicable portions of the UST System tested in accordance with these Regulations, or as directed by the Department before the UST System is placed into service.

2.29.8 Repairs to fiberglass reinforced plastic Tanks may be made only by the manufacturer or by its authorized representatives.

2.29.9 Owners and Operators may not Repair holes in Piping and fittings, but shall replace any piece of such Piping or fittings from which a Release has occurred. Replacement Piping and fittings shall meet all applicable Piping requirements in Part B, Section 1.0. Loose fittings and joints in Piping that have been tightened to eliminate leakage may be put back into service.

2.29.10 At any time during the course of a Repair, Retrofit or Upgrade there is an indication of a Release the requirements of Part E of these Regulations shall be followed.

2.29.11 At any time excavation of soil or removal of concrete, asphalt or other cover is required during the course of a Repair, Retrofit or Upgrade, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Repair, Retrofit or Upgrade of the UST System.

2.29.12 Within sixty (60) Days of completion of a Repair, Retrofit or Upgrade of an UST System Owners and Operators and UST Contractors shall submit documentation to the Department including the following:

2.29.12.1 Repair, Retrofit or Upgrade completion documentation; and

2.29.12.2 Results of sampling required in Part E of these Regulations or Part B, subsection 2.29.10; and

2.29.12.3 Results of any UST System tests required by the Department.

2.30 Used Oil UST Systems Requirements

2.30.1 General Requirements

2.30.1.1 Owners and Operators of UST Systems used solely for the storage of Used Oil shall comply with all the requirements of these Regulations.

2.30.2 Release Detection Requirements for Used Oil UST Systems

2.30.2.1 Owners and Operators shall monitor Used Oil UST Systems for Releases through the use of the inventory control procedure in Part B, subsection 2.30.5 and at least one of the following Release Detection methods:

2.30.2.1.1 Interstitial monitoring as prescribed in Part B, subsection 2.9; or

2.30.2.1.2 Automatic Tank gauge performing Tank tightness testing at a minimum of once every thirty (30) Days in accordance with Part B, subsection 2.9.5; or

2.30.2.1.3 Manual tank gauging as prescribed in subsection 2.30.4 may be utilized for Used Oil UST Systems with a nominal capacity of 550 gallons or less or Used Oil UST Systems with a nominal capacity of 551 to 1000 gallons that meet the Tank diameter criteria in Table 2.

2.30.3 Inventory Control Requirements for Used Oil UST Systems

2.30.3.1 Owners and Operators of Used Oil UST Systems shall utilize inventory control procedures performed in accordance with the requirements of Part B, subsection 2.30.5.

2.30.3.1.1 Owners and Operators of Used Oil UST Systems with a nominal capacity of 551 to 2000 gallons not meeting the Tank diameter criteria in Table 2 shall utilize manual tank gauging performed in accordance with the requirements of Part B, subsection 2.30.4.

2.30.4 Manual Tank Gauging Procedure for Used Oil UST Systems

2.30.4.1 Owners and Operators shall utilize manual tank gauging test procedures that meet the following requirements:

2.30.4.1.1 Once every seven (7) Days the Used Oil UST shall be tested. No Used Oil shall be added to or removed from the Used Oil UST during the prescribed test period in Part B, Table 2; and

2.30.4.1.2 At the beginning and at the end of the test period the liquid level in the Used Oil UST shall be measured twice consecutively to the nearest one-eighth (1/8) inch and the average of the two measurements shall be recorded; and

2.30.4.1.3 At the end of each seven (7) Day test period the change in Tank volume shall be calculated from the beginning and ending liquid level measurements and compared to the weekly test standard in Part B, Table 2; and

2.30.4.1.4 At a minimum of once every thirty (30) Days the four (4) most recent change in Tank volume numbers calculated in Part B, subsection 2.30.4.1.3 shall be averaged and this test average shall be compared to the monthly test standard in Part B, Table 2; and

2.30.4.1.5 If at any time the weekly or monthly change in Tank volume test average exceeds the test standard in Part B, Table 2, Owners and Operators shall notify the Department of an indicated Release within twenty-four (24) hours of the end of the test period; and

2.30.4.1.6 Owners and Operators shall keep all manual Tank gauging records utilized to comply with inventory control requirements on file for a minimum of three (3) years and shall make the records available to the Department within fourteen (14) Days of the Department's request; and

2.30.4.1.7 Owners and Operators shall keep all manual Tank gauging records utilized to comply with Release Detection requirements on file for three (3) years and shall make the records available to the Department within fourteen (14) Days of the Department's request.

Table 2

Tank Capacity	Minimum Duration of Test	Weekly Standard (1 test)	Monthly Standard (4-test average)
Up to 550 gallons	36 hours	10 gallons	5 gallons
551-1,000 gallons (when Tank diameter if 64")	44 hours	9 gallons	4 gallons
551-1,000 gallons (when Tank diameter is 48")	58 hours	12 gallons	6 gallons
551-1,000 gallons (also requires monthly Release Detection in accordance with Part B, subsection 2.30.2)	36 hours	13 gallons	7 gallons
1,001 -2,000 gallons (also requires monthly Release Detection in accordance with Part B, subsection 2.30.2)	36 hours	26 gallons	13 gallons

2.30.5 Inventory Control Procedure for Used Oil UST Systems

2.30.5.1 Owners and Operators shall utilize an inventory control procedure that meets the following requirements:

2.30.5.1.1 The Regulated Substance level shall be measured in inches to the nearest one-eighth (1/8) of an inch and shall be recorded each Day that an UST has Used Oil added to or withdrawn from the UST, or at least once every seven (7) Days; and

2.30.5.1.2 The water level shall be measured in inches to the nearest one-eighth (1/8) of an inch and shall be recorded at least once every seven (7) Days. If the water level changes two (2) inches or more from the last measurement the Owner or Operator must contact the Department within twenty-four (24) hours; and

2.30.5.1.3 The amount of Used Oil removed from the UST shall be recorded, and receipts for Used Oil removal shall be maintained and made available to the Department upon request; and

2.30.5.1.4 If there is an unexplainable consistent negative trend in any given month, or if the amount of Used Oil removed from the UST is less than the amount indicated by the modified inventory control, the Department shall be notified, and the indicated Release investigation procedures in Part E of these Regulations shall be followed; and

2.30.5.1.5 Failure to maintain inventory control records for Used Oil UST Systems may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility at the expense of Owners and Operators.

2.30.6 Overfill Prevention Requirements for Used Oil UST Systems

2.30.6.1 Owners and Operators of Used Oil UST Systems shall comply with the overfill requirements in Part B, subsection 2.23 or shall follow a written standard operating procedure that includes the following minimum requirements:

2.30.6.1.1 Determine and record the maximum gallons allowable such that the UST shall not be more than ninety percent (90%) full; and

2.30.6.1.2 The level of Used Oil shall be measured each Day an UST has Used Oil added to or withdrawn from the UST to determine the current amount of ullage space available; and

2.30.6.1.3 The amount of Used Oil added shall be such that the UST is not more than ninety percent (90%) full; and

2.30.6.1.4 The amount of Used Oil removed from the UST shall be recorded; and

2.30.6.1.5 Receipts for Used Oil removal shall be maintained and made available to the Department upon request to ensure that the UST is not filled beyond ninety percent (90%) capacity.

2.30.7 Spill Prevention Requirements for Used Oil UST Systems

2.30.7.1 No Person shall construct, install, use or maintain a UST storing Used Oil without providing a reliable means of ensuring that Releases due to spilling do not occur. Owners and Operators shall comply with the requirements of Part B, subsection 2.22.2.

2.30.7.2 Owners and Operators shall equip Used Oil UST Systems with an impervious spill containment device that forms a Liquid Tight seal around any fill Pipe or pump out location.

2.30.7.3 All spill containment devices shall have a minimum containment capacity of five (5) gallons or be of a design that provides equivalent environmental protection.

2.30.7.4 Owners and Operators shall immediately upon discovery remove water, Used Oil or debris that accumulates in the spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

2.30.7.5 All precautions shall be taken to prevent Tank overfilling, spilling and dripping.

2.30.7.6 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 2.22.8.

2.30.7.7 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part B, subsection 2.22.8 and the interstitial sensors shall be tested in accordance with Part B, subsection 2.28.

2.30.7.8 Owners and Operators shall report, investigate and clean up any spills and overfills in accordance with Part E of these Regulations.

2.31 Emergency Generator UST Systems Requirements

2.31.1 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment shall comply with all the requirements of these Regulations except where modifications are specifically listed in this Section.

2.31.2 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment are exempt from inventory control requirements of Part B, subsection 2.9.3.

2.31.3 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment shall utilize monthly Tank tightness testing for single walled UST Systems or interstitial monitoring for double walled UST Systems to satisfy Release Detection requirements. Monthly Tank tightness testing shall be used for the life of the UST System provided it is performed in accordance with the Tank tightness test requirements in Part B, subsection 2.9.2.1.2 or interstitial monitoring requirements of Part B, subsection 2.9.2.1.1.

2.31.4 Owners and Operators of UST Systems used solely for the storage of Regulated Substance to power emergency generation equipment shall comply with the Piping Release Detection tightness test requirements of Part B.

2.31.5 Owners and Operators of UST Systems used solely for the storage of a Regulated Substance to power emergency generation equipment are required to implement one of the following Line leak detection requirements:

2.31.5.1 Emergency generator systems that utilize a submersible turbine pump to convey a Regulated Substance to a day Tank or emergency generator which discharges at atmospheric pressure shall meet the Piping Release Detection requirements as follows:

2.31.5.1.1 Emergency generator systems with single wall Piping shall meet the Piping Release Detection requirements of Part B, subsection 2.18.1.2 and subsection 2.21.2.

2.31.5.1.2 Emergency generator systems with double wall Piping shall meet the Piping Release Detection requirements of Part B, subsection 2.20.2 and subsection 2.21.2.

2.31.5.2 Emergency generator systems, with single wall or double wall Piping, utilizing safe suction Piping systems shall meet the Piping Release Detection requirements of Part B, subsection 2.18.1.1.

2.31.5.3 Emergency generator systems with a foot valve (U.S. Suction) shall meet the Piping Release Detection requirements of Part B, subsection 2.18.1.2.

2.31.5.3.1 Emergency generator systems with single wall Piping shall meet the Piping Release Detection requirements of Part B, subsection 2.18.1.2.

2.31.5.3.2 Emergency generator systems with double wall Piping shall meet the Piping Release Detection requirements of Part B, subsection 2.20.2.

2.31.6 Emergency generator systems meeting the requirements of subsection 2.31.5 are not eligible for the Piping slope exemption described in Part A, Section 14.0.

2.32 Routine Inspection Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.32.1 Owners and Operators shall conduct an inspection at an interval no less frequently than once every thirty (30) Days, unless specified in Part B, subsection 2.32.1.6, to monitor the condition of the UST System including all Dispensers, Dispenser sumps, access ports, spill containment devices, transition sumps and Containment Sumps. The routine inspection shall at a minimum include the following:

2.32.1.1 The removal of all dispenser covers and visual inspection for any evidence of a Release of a Regulated Substance and inspection of all fittings, couplings and filters; and

2.32.1.2 The removal of all Containment Sump and transition sump covers and visual inspection of the sump for any evidence of a Release of a Regulated Substance or intrusion of water; and

2.32.1.3 The inspection of all access ports and drop tubes to verify that the covers, caps and adaptors are tightly sealed and equipment is free of debris or blockage; and

2.32.1.4 The removal of all spill containment device covers and inspection to ensure all spill containment devices, including spill containment devices located within multi-port Containment Sumps, are free of debris or blockage, liquid or water or Regulated Substance; and

2.32.1.5 The inspection of all electronic, mechanical, and hand held Release Detection equipment including automatic tank gauges, tank gauge sticks or groundwater bailers, for alarms, unusual operating conditions, operability and serviceability.

2.32.1.6 Submersible turbine pump Containment Sumps that are part of an UST System may be inspected no less frequently than once every twelve (12) months providing the following conditions are met:

2.32.1.6.1 UST System shall be equipped with continuous interstitial monitoring operated and maintained in accordance with Part B, subsection 1.19.1 and Part B, subsection 1.19.2.

2.32.1.6.2 All product, vent and vapor return Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot in accordance with Part B, subsection 2.14.3.

2.32.1.6.3 All sump sensors utilized for Release Detection shall be operated, monitored and tested in accordance with Part B, subsection 2.28.

2.32.1.6.4 If at any time the UST system fails to meet the conditions specified in Part B, subsection 2.32.1.6, the Owner or Operator shall notify the Department that the submersible turbine pump Containment Sump inspection shall be at a frequency no less than once every thirty (30) Days as specified in Part B, subsection 2.32.1.

2.32.2 A record of all routine inspections shall be kept on file by Owners and Operators for a minimum of three (3) years and shall be made available to the Department upon request. The records shall at a minimum include the results of all inspections including any Repairs made.

2.32.3 If at any time during a routine inspection evidence of a Release of Regulated Substance is discovered Owners and Operators shall follow the investigation requirements of Part E of these Regulations.

2.33 Internal Lining Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

2.33.1 An internal lining shall not be utilized to meet corrosion protection requirements after January 11, 2008.

2.33.2 An internal lining may be added to an UST System to ensure the UST System is Compatible with the substance stored and to prevent the release of Regulated Substance.

2.33.3 The internal lining installation, operation and Maintenance shall meet the following requirements:

2.33.3.1 The lining shall be installed in accordance with the following industry standards:

2.33.3.1.1 API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks*; and

2.33.3.1.2 NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks*; and

2.33.3.1.3 NLPA Standard 631, Chapter B, *Future Internal Inspection Requirements for Lined Tanks*.

2.33.3.2 The lined Tank shall be tested for tightness in accordance with Part B, subsection 2.9.7 and found to be tight before the Tank is put back into service; and

2.33.3.3 Within ten (10) years after lining, and every five (5) years thereafter, Owners and Operators shall conduct an internal inspection of the lined Tank in accordance with NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks* and Chapter B, *Future Internal Inspection Requirements for Lined Tanks*, and API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks*. At the time of the inspection, the lined Tank shall be structurally sound and comply with the original design specifications. If any damage is found, Repairs shall be made in accordance with standard engineering practice, industry standards and the requirements of these Regulations or the Tank shall be replaced in accordance with the requirements in Part B, Section 1.0.

2.33.3.4 When an internally lined bare steel Tank is not inspected at a minimum in accordance with the intervals required in Part B, subsection 2.33.3.3 and subsequently fails an internal inspection the Tank shall be Removed or Closed In Place in accordance with these Regulations.

2.34 Additional Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance installed prior to July 12, 1985.

2.34.1 Not later than January 1, 1991, no Person shall own or operate an UST System Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance installed prior to July 12, 1985 that is not in compliance with one of the following:

2.34.1.1 The Removal or Closure In Place of the UST System in accordance with the requirements of Part B, Section 4.0 and the applicable hydrogeologic investigation and Remedial Action requirements of Part E of these Regulations; or

2.34.1.2 The requirements of the following:

2.34.1.2.1 The Tank release detection requirements of Part B, subsection 2.9; and

2.34.1.2.2 The Piping release detection requirements of Part B, subsections 2.19 and 2.20 or 2.21; and

2.34.1.2.3 The spill prevention requirements of Part B, subsection 2.22; and

2.34.1.2.4 The overfill prevention requirements of Part B, subsection 2.23; and

2.34.1.2.5 The fill Line protection requirements of Part B, subsection 2.24.

2.34.2 Not later than December 22, 1998, no Person shall own or operate an UST System Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance installed prior to July 12, 1985 that is not in compliance with the requirements of one of the following:

2.34.2.1 UST System design requirements of Part B, subsection 2.3; or

2.34.2.2 UST System Cathodic Protection requirements of Part B, subsections 2.6 and 2.25; or

2.34.2.3 UST System Internal Lining Requirements of Part B, subsection 2.33; or

2.34.2.4 UST System Cathodic Protection requirements of Part B, subsections 2.6 and 2.25 and UST System Internal Lining requirements of Part B, subsection 2.33; or

2.34.2.5 The Removal or Closure In Place of the UST System in accordance with the requirements of Part B, Section 4.0 of these Regulations and the applicable hydrogeologic investigation and Remedial Action requirements of Part E of these Regulations.

11 DE Reg. 922 (01/01/08)

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

3.0 Change In Service Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

3.1 Owners and Operators shall notify the Department of all Changes In Service in accordance with the requirements of Part A, Section 4.0 of these Regulations.

3.2 General Requirements for Change In Service from In Service to Out Of Service for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance.

3.2.1 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part B, Sections 1.0 and 2.0 when an UST System is Out Of Service.

3.2.2 Owners and Operators shall continue operation and Maintenance of Release Detection in accordance with the applicable Release Detection requirements for Tanks and Piping in Part B, Sections 1.0 and 2.0, when an UST System is Out Of Service.

3.2.3 Owners and Operators shall continue to perform routine UST System testing in accordance with Part B, Section 1.0.

3.2.3.1 Leave vent Pipes open and functioning; and

3.2.3.2 Cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

3.2.4 Owners and Operators shall comply with the routine inspection requirements of Part B, subsection 1.31 or 2.32 when an UST System is Out Of Service.

3.3 General Requirements for Change In Service from Out Of Service to In Service for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

3.3.1 Prior to a Change In Service of an UST System from Out Of Service to In Service Owners and Operators shall ensure that the UST System meets the following requirements prior to being placed In Service:

3.3.1.1 The UST System shall meet the requirements of Part B, Sections 1.0 or 2.0 as applicable; and

3.3.1.2 The UST System shall be tested for tightness as applicable; and

3.3.1.3 All Cathodically Protected UST Systems shall be tested and all necessary Repairs made in accordance with the requirements of Part B, subsection 2.25.

3.4 Change In Service Site Assessment Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

3.4.1 When an UST System is Out Of Service for twelve (12) months, Owners and Operators shall complete a Site Assessment designed to measure for the presence of a Release where contamination is most likely to be present. The Site Assessment is not restricted to the property containing the UST System. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

3.4.2 Owners and Operators shall submit the following documents to the Department within thirty (30) Days of the completion of the Site Assessment required in Part B, subsection 3.4.1:

3.4.2.1 A site plan detailing the UST(s) location and surrounding area; and

3.4.2.2 The approved Site Assessment plan with sampling points clearly marked; and

3.4.2.3 Chain of custody for all samples submitted for laboratory analysis; and

3.4.2.4 Results of any on-site screening performed; and

3.4.2.5 Laboratory test results for all samples submitted for laboratory analysis; and

3.4.2.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change In Service of the UST System, including manifests and receipts for soil, water, and Regulated Substances.

3.4.2.7 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part B, subsection 3.4.1, or by any other manner, Owners and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

3.5 Financial Responsibility Requirements for Out Of Service UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

3.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations for Out Of Service UST Systems.

23 DE Reg. 581 (01/01/20)

4.0 Removal or Closure in Place Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.1 Owners and Operators shall notify the Department of all Removals or Closures in Place in accordance with the requirements of Part A, Section 4.0 of these Regulations.

4.2 Removal or Closure In Place General Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.2.1 The Removal and Closure In Place procedures shall comply with the following industry standards:

4.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks*.

4.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

4.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*.

4.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

4.3 Removal or Closure In Place Site Assessment Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.3.1 At the time of Removal of an UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Removal of the UST System.

4.3.2 At the time of Closure In Place of an UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation. The Site Assessment shall be completed within fourteen (14) Days of the Closure In Place of the UST System.

4.3.3 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part B, subsections 4.3.1 and 4.3.2, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

4.4 Removal or Closure In Place Recordkeeping Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.4.1 Owners and Operators shall submit the following documents to the Department within sixty (60) Days of the Removal or Closure In Place of an UST System:

4.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

4.4.1.2 A site map with sampling points clearly marked; and

4.4.1.3 Results of any on-site screening performed; and

4.4.1.4 Chain of custody for all samples submitted for laboratory analysis; and

4.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

4.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Removal of the UST System, including manifests and receipts for soil, water, and Regulated Substances and the UST System disposal; and

4.4.1.7 Documentation of Tank cleaning prior to UST System Closure in Place.

4.5 Removal or Closure in Place Financial Responsibility Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations until the UST System is Removed or Closed In Place in accordance with the requirements of Part B.

4.6 Applicability to Previously Removed or Closed In Place UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

4.6.1 When a Release is suspected from a previously Removed, Closed In Place or abandoned UST System, the Owner, Operator and Responsible Party shall comply with the requirements of Part E of these

Regulations. If a Release is confirmed the Owner, Operator and Responsible Party shall Remove or Close In Place the UST System in accordance with all applicable requirements of these Regulations.

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5.0 Change In Substance Stored Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

5.1 Owners and Operators shall notify the Department of all Changes in Substance Stored in accordance with the requirements of Part A, Section 4.0 of these Regulations.

5.2 Change In Substance Stored General Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

5.2.1 Before the Change In Substance Stored, Owners and Operators shall Empty and clean the UST System by removing all liquids and accumulated sludge in accordance with the following industry standards:

5.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks*.

5.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

5.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*.

5.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

5.3 Change In Substance Stored Site Assessment Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

5.3.1 Within thirty (30) Days of the completion of the cleaning of the UST System required in Part B, subsection 5.2, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

5.3.2 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part B, subsection 5.3.1, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

5.4 Change In Substance Stored Recordkeeping Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

5.4.1 Owners and Operators shall submit the following documents to the Department within sixty (60) Days of the Change In Substance Stored in an UST System:

5.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

5.4.1.2 The approved Site Assessment plan with sampling points clearly marked; and

5.4.1.3 Chain of custody for all samples submitted for laboratory analysis; and

5.4.1.4 Results of any on-site screening performed; and

5.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

5.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change in Substance Stored of the UST System, including manifests and receipts for soil, water, and Regulated Substances.

5.5 Change In Substance Stored Financial Responsibility Requirements for UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

5.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations until the UST System is Removed or Closed In Place in accordance with Part B, Section 4.0 or is rendered Empty in accordance with Part B, Section 6.0.

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6.0 Requirements for Empty UST Systems Storing Regulated Substance excluding Consumptive Use Heating Fuel or Hazardous Substance

6.1 When any UST System is Empty:

6.1.1 Owners and Operators shall leave vent Pipes open and functioning, and cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

6.1.2 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part B, Sections 1.0 and 2.0 until the UST System is Removed or Closed In Place in accordance with Part B, Section 4.0.

6.1.3 Release Detection and Routine Inspection are not required.

6.2 Within three (3) months of rendering any UST System Empty, Owners and Operators shall complete a Site Assessment in accordance with Part B, subsection 3.4 or perform a Removal or a Closure In Place of the UST System in accordance with Part B, Section 4.0.

23 DE Reg. 581 (01/01/20)

Part C: Requirements for Installation, Operation and Maintenance of Consumptive Use Heating Fuel Underground Storage Tank Systems

1.0 Installation, Operation and Maintenance Requirements for Consumptive Use Heating Fuel UST Systems Installed After January 11, 2008

1.1 General Requirements for Consumptive Use Heating Fuel UST Systems

1.1.1 Owners and Operators shall ensure that all Consumptive Use Heating Fuel UST Systems with a capacity of greater than one thousand one hundred (1,100) gallons shall be designed, constructed, installed and operated in accordance with manufacturer's specifications, and accepted engineering practices and procedures; and in a manner which will prevent Releases of Consumptive Use Heating Fuel to the ground waters, surface waters or soils of the State due to corrosion, structural failure, manufacturing defects, spills, and overfills for the Operational Life of the UST System.

1.1.2 The material used in the construction and lining of the UST System shall be Compatible with the substances to be stored in the UST System.

1.1.3 Components of the UST system shall be approved by Underwriters Laboratories or equivalent third party certified.

1.1.4 All Consumptive use Heating Fuel UST Systems installed after January 11, 2008, with a storage capacity of greater than one thousand one hundred (1,100) gallons shall be designed and installed in accordance with the Secondary Containment requirements in accordance with Part C, subsection 1.4.

1.1.5 Bare steel UST Systems or steel UST Systems coated with asphalt are prohibited.

1.1.6 Owners and Operators shall install, operate and maintain all equipment such that manufacturer's warranties are not voided.

1.2 General Installation Requirements for Consumptive Use Heating Fuel UST Systems.

1.2.1 Prior to the installation of any Consumptive Use Heating Fuel UST System with a storage capacity of greater than one thousand one hundred (1,100) gallons a site survey shall be initiated by the Facility Owner and Operator. The pre-installation site survey shall be conducted to determine the locations of nearby buildings, underground utilities and sewer lines.

1.2.2 Private and public drinking water wells, rivers, streams, lakes, canals, wetlands, floodplains, State designated Natural Areas, and other environmentally sensitive locations shall be recorded and incorporated into the design of the UST System Facility.

1.2.3 UST System Owners and Operators shall notify the Department at least thirty (30) Days prior to installation of all Consumptive Use Heating Fuel UST Systems with a storage capacity greater than one thousand one hundred (1,100) gallons. Notice shall include a site plan, the scale of which shall be one (1) inch equals ten (10) feet or less and which shall at a minimum include the following:

1.2.3.1 The information determined from the pre-installation site survey in Part C, subsection 1.2.1; and

1.2.3.2 Size and location of Tanks including Tank dimensions, depth of cover, Empty Tank weight, Tank manufacturer and Tank type; and

1.2.3.3 The UST System installation location, streets, roads, other properties bordering the construction site; and

1.2.3.4 Piping dimensions and layout; and

1.2.3.5 Dimensions and locations of vents; and

1.2.3.6 Type of Consumptive Use Heating Fuel to be stored; and

1.2.3.7 Location of overfill device, spill prevention system and monitoring devices including dimensions of spill containment devices and sumps when applicable; and

1.2.3.8 Location of burner unit(s), as appropriate; and

1.2.3.9 Materials of construction for Tank(s), Piping and associated appurtenances, including manufacturer name, model numbers and any manufacturer's catalog information requested by the Department; and

1.2.3.10 Location of and access to check valves, antisiphon valves, automatic Line leak detectors, and flexible connectors; and

1.2.3.11 Location of Cathodic Protection components and test stations; and

1.2.3.12 Location of utilities (both aboveground and underground); and

1.2.3.13 Location of electrical service components; and

1.2.3.14 Details and dimensions of anchoring method including hold down pads, cover pads or deadmen and electrical isolation methods associated with the anchoring system if applicable. Indicate on plan if area is subject to vehicle traffic; and

1.2.3.15 Map with the distance clearly labeled in feet from the UST System to all Domestic and Industrial Wells and surface water bodies within one hundred and fifty (150) feet of the UST System.

1.2.4 After January 11, 2008, new Consumptive Use Heating Fuel UST Systems with a storage capacity greater than one thousand one hundred (1,100) gallons shall not be installed within a minimum distance of a one hundred and fifty (150) foot radius from Public or Industrial Wells, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part C, subsection 1.2.4.

1.2.5 After January 11, 2008, new Consumptive Use Heating Fuel UST Systems with a storage capacity greater than one thousand one hundred (1,100) gallons shall not be installed within a minimum distance of a one hundred (100) foot radius from a Domestic Well, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part C, subsection 1.2.5.

1.3 Design Requirements for Consumptive Use Heating Fuel UST Systems.

1.3.1 Acceptable designs for Consumptive Use Heating Fuel UST System construction include:

1.3.1.1 Secondarily Contained Cathodically Protected steel (STi-P3); or

1.3.1.2 Secondarily Contained fiberglass reinforced plastic; or

1.3.1.3 Secondarily Contained steel with non-metallic or coated outer shell.

1.3.2 Consumptive Use Heating Fuel UST Systems shall be installed in accordance with these Regulations, the manufacturer's specifications, accepted engineering practices and the following industry standards:

1.3.2.1 PEI RP 100, *Recommended Practices for Installation of Liquid Underground Storage Systems*.

1.3.2.2 NFPA 30, *Flammable and Combustible Liquids Code*.

1.3.2.3 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.3.2.4 OSHA, 29 CFR, 1926 Subpart P, *Excavations*.

1.3.3 All Tanks shall be equipped with a strike plate located beneath all Tank openings.

1.4 Secondary Containment Design Requirements for Consumptive Use Heating Fuel UST Systems.

1.4.1 The Department shall require Secondary Containment on any portion of the UST System where aquifers underlying the UST Facility are determined to need such protection, or where groundwater below the UST Facility is within a well head protection area, or where groundwater is susceptible to contamination in order to protect the safety, health, welfare and environment of the State.

1.4.2 Secondary Containment systems shall be designed, constructed and installed to:

1.4.2.1 Contain Consumptive Use Heating Fuels Released from the UST System until it is detected and removed; and

1.4.2.2 Prevent the Release of Consumptive Use Heating Fuel to the environment at any time during the Operational Life of the UST System; and

1.4.2.3 Be checked for evidence of a Consumptive Use Heating Fuel Release at least once every thirty (30) Days.

1.4.3 Secondary containment systems shall include the following:

1.4.3.1 Double walled Tank; and

1.4.3.2 Double walled Consumptive Use Heating Fuel return Piping and, where required, vent Piping; and

1.4.3.3 Containment Sumps at the Tank top that meet the requirements of Part C, subsection 1.25.

1.4.4 All Secondary Containment systems shall be constructed in accordance with acceptable engineering practices, industry standards and shall have a Release Detection system in accordance with Part C, subsection 1.9.

1.5 Double Walled UST Design Requirements for Consumptive use Heating Fuel UST Systems

1.5.1 Acceptable Consumptive Use Heating Fuel UST System designs in Part C, subsection 1.3 shall be fabricated in double walled construction in accordance with accepted engineering practice and industry standards.

1.5.2 A double walled Tank which is designed and manufactured in accordance with the following requirements satisfies the requirements for Secondary Containment in Part C, subsection 1.4:

1.5.2.1 The interstitial space of the double walled Tank can be monitored for Releases; and

1.5.2.2 Outer jackets made of steel shall be coated as prescribed in Part C, subsection 1.6.2; and

1.5.2.3 There are no penetrations of any kind through the jacket to the Tank except top entry manholes and fittings; and

1.5.2.4 The outer jacket shall cover the entire circumference of the Tank; and

1.5.2.5 The jacket shall be able to contain a liquid or be able to contain a vacuum from the time of manufacture completion until the time of installation.

1.5.2.6 All Tanks shall be equipped with a strike plate beneath all Tank openings.

1.6 Cathodically Protected Steel UST Design Requirements for Consumptive Use Heating Fuel UST Systems

1.6.1 Cathodically Protected steel UST Systems shall be designed, constructed, installed and tested in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, and the applicable industry standards, including the following:

1.6.1.1 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

1.6.1.2 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks*.

1.6.1.3 STI P3, *Specification for sti P3® System for External Corrosion Protection of Underground Steel Storage Tanks*.

1.6.1.4 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks*.

1.6.1.5 STI R-972, *Recommended Practice for the Addition of Supplemental Anodes to sti-P3® USTs.*

1.6.2 The Tank shall be coated with a suitable Dielectric Material in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*.

1.6.3 Field-installed Cathodic Protection systems shall be designed, constructed, installed and tested in accordance with manufacturer's specifications, accepted engineering practice and the requirements listed in this Section.

1.6.4 Each Cathodic Protection system shall include sufficient monitoring stations to enable Owners and Operators to check on the adequacy of the Cathodic Protection system.

1.6.5 UST Systems that are protected by Sacrificial Anodes shall be electrically insulated from the Piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to petroleum, additives, corrosive soils or groundwater.

1.7 Fiberglass Reinforced Plastic UST Design Requirements for Consumptive Use Heating Fuel UST Systems

1.7.1 Fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards:

1.7.1.1 UL 1316, *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol-Gasoline Mixtures*.

1.7.2 Fiberglass reinforced plastic UST Systems shall be of sufficient structural strength to withstand normal handling and underground use and shall be Compatible with the Consumptive use Heating Fuel and additives stored, corrosive soils and groundwater. UST System construction materials shall be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

1.7.3 Fiberglass reinforced plastic Tanks shall be tested for deflection in accordance with the manufacturer's requirements at the time of installation.

1.8 Steel with Non-Metallic or Coated Outer Shell UST Design Requirements for Consumptive Use Heating Fuel UST Systems

1.8.1 Steel with non-metallic or coated outer shell UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.8.1.1 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks*.

1.8.1.2 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids*.

1.8.1.3 STI F-922, *Specification for Permatank®*.

1.8.1.4 STI F-894, *ACT-100® Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks*.

1.8.1.5 STI F-961, ACT-100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.*

1.8.1.6 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks*.

1.8.2 The coating shall not corrode under adverse underground electrolytic conditions and shall be Compatible with the Consumptive Use Heating Fuel and additives stored.

1.8.3 The coating shall be factory inspected for air pockets, cracks, blisters pinholes and electrically tested by a ten thousand (10,000) volts holiday test performed over one hundred percent (100%) of the surface for coating short circuits or coating faults or in accordance with the manufacturer's specifications.

1.8.4 Any defects shall be Repaired in accordance with standard engineering practice and the manufacturer's requirements.

1.9 Release Detection Requirements for UST Systems Storing Consumptive Use Heating Fuel

1.9.1 General Requirements

1.9.1.1 Owner and Operators shall provide a method, or combination of methods of Release Detection on all Consumptive Use Heating Fuel UST Systems with a storage capacity greater than one thousand one hundred (1,100) gallons that meets the following requirements:

1.9.1.1.1 Utilizes a method or methods capable of detecting a Release from any portion of the Tank and the connected underground Piping that routinely contain Consumptive Use Heating Fuel at a minimum of once every thirty (30) Days;

1.9.1.1.2 Is installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, including routine Maintenance and service checks for operability or running condition; and

1.9.1.1.3 Meets the performance standards for Release Detection in this Section, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. The method shall be capable of detecting the leak rate or quantity specified for Precision Testing, automatic tank gauging, Line leak detectors, and line tightness testing methods specified in these Regulations with a probability of detection of at least 0.95 and a probability of false alarm no greater than 0.05; and

1.9.1.1.4 Is operational prior to Regulated Substance being placed in the UST System.

1.9.1.1.5 Statistical Inventory Reconciliation (SIR) methods are not approved for Tank Release Detection.

1.9.1.2 Owners and Operators shall implement the indicated Release investigation procedures in Part E of these Regulations if the Release Detection equipment or method shows indication of a Release.

1.9.1.3 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

1.9.2 Methods of Release Detection for Tanks Storing Consumptive Use Heating Fuel

1.9.2.1 Owners and Operators shall monitor Consumptive Use Heating Fuel UST Systems greater than one thousand one hundred (1,100) gallons for Releases through the use of at least one of the following Release Detection methods:

1.9.2.1.1 Continuous interstitial monitoring; or

1.9.2.1.2 Automatic Tank gauge performing Tank tightness testing in accordance with Part C, subsection 1.9.4 for Tanks installed prior to January 11, 2008 that are unable by design to accommodate the continuous interstitial monitoring Release Detection method required in Part C, subsection 1.9.2.1.1.

1.9.3 Interstitial Monitoring Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

1.9.3.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a leak from any portion of the Tank that routinely contains Consumptive Use Heating Fuel.

1.9.3.2 At a minimum of once every thirty (30) Days, Owners and Operators shall inspect all interstitial monitoring devices utilized for Release Detection for evidence of a Release from the UST System and shall record the results.

1.9.3.3 The interstitial monitoring equipment shall be capable of producing a record of Release Detection monitoring results. Original test records or equivalent third party test reports that duplicate the ATG console settings and test programming shall be made available upon request.

1.9.3.4 Owners and Operators shall maintain records of the interstitial Release monitoring results for three (3) years.

1.9.3.5 Owners and Operators shall have all interstitial monitoring equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.3.5.1 Inspection of the console for printer operation if so equipped; and

1.9.3.5.2 Verification of the system setup values and battery backup; and

1.9.3.5.3 Verification of the test programming; and

1.9.3.5.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.3.5.5 Inspection and testing of all probes and interstitial sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.3.5.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.3.5.7 Correction of any problems found as a result of the required inspection.

1.9.3.6 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment for three (3) years and any Repairs performed as a result of the inspection for their time of ownership or operation of the UST System.

1.9.4 Automatic Tank Gauging Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

1.9.4.1 Tank tightness testing using automatic tank gauging (ATG) equipment shall meet the following requirements:

1.9.4.1.1 The ATG equipment can detect a 0.1 gallon per hour leak rate from any portion of the Tank that routinely contains Consumptive Use Heating Fuel; and

1.9.4.1.2 The ATG equipment shall be capable of producing a record of the Release Detection test results; and

1.9.4.1.3 At a minimum of once every thirty (30) Days the ATG equipment shall perform a Release Detection test for each Tank and shall produce a record of such test. Original test records or equivalent third party Release Detection test reports that duplicate the ATG console settings and test programming shall be made available upon request.

1.9.4.1.4 Owners and Operators shall maintain a record of all Release Detection tests performed by the ATG equipment for three (3) years.

1.9.4.2 Owners and Operators shall have all ATGs inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.4.2.1 Inspection of the ATG console for proper printer operation if so equipped; and

1.9.4.2.2 Verification of the system setup values and battery backup; and

1.9.4.2.3 Verification of the test programming; and

1.9.4.2.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.4.2.5 Inspection and testing of the probes and sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.4.2.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.4.2.7 Correction of any problems found as a result of the required inspection.

1.9.4.2.8 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment and any Repairs performed as a result of the inspection for three (3) years.

1.10 Anchoring Requirements for Consumptive Use Heating Fuel UST Systems

1.10.1 Support and anchorage shall be provided for all new installations to avoid Tank flotation and shall be installed in accordance with the PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.10.2 One or more of the following methods of anchorage shall be utilized:

1.10.2.1 Reinforced concrete deadmen anchors; or

1.10.2.2 Bottom hold-down pad which consists of eight inches of reinforced concrete that extends eighteen (18) inches beyond Tank sides and twelve (12) inches beyond each end; or

1.10.2.3 Reinforced concrete slab over Tank.

1.10.3 All exposed metallic components of hold down systems shall be Electrically Isolated and Cathodically Protected when the hold down system is required by the Department.

1.11 Backfill Material Requirements for Consumptive Use Heating Fuel UST Systems

1.11.1 Backfill material shall consist of sand, crushed rock or pea gravel. The material shall be clean, washed, inert, free flowing, homogeneous, well granulated, non corrosive, and free of debris, rock, ice, snow or organic material. Particle length of crushed rock or pea gravel shall be no less than one eighth (1/8) inch and no more than three-fourths (3/4) inch in size. Backfill material shall comply with the Tank manufacturer's specifications. Mixing of backfill with native soil or foreign objects is prohibited.

1.11.2 The backfill depth shall be consistent with the requirements in PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.12 Requirements for Installation of Consumptive Use Heating Fuel UST Systems in an Existing UST Facility

1.12.1 If a new UST System shall be installed in or near an existing or previous UST System, Owners and Operators shall conduct a Site Assessment in accordance with Part C, subsections 1.27.10 and 1.27.11 and provide a means of Release Detection that shall detect any future Release from any portion of the UST System in accordance with Part C, subsections 1.9 and 1.18.

1.13 Tank and Piping Installation, Inspection and Testing Requirements for Consumptive Use Heating Fuel UST Systems

1.13.1 Prior to installation Tank system materials and equipment shall be inspected for flaws, surface cracks, holes, large scrapes, blisters, indentations and other indications of damage. All defects and Repairs to the UST System shall be recorded and the record submitted with a site completion report to the Department.

1.13.2 All Tanks shall be air pressure tested according to the manufacturer's specifications prior to installation of the Tank(s) into the excavation. The installer shall soap the exterior, particularly its seams and fittings, and pressure test the Tank(s) using the manufacturer's specifications to locate and correct defects. Tank and interstitial space testing shall be conducted according to the manufacturer's recommendations and accepted engineering practices.

1.13.3 After installation all Piping, including all interstitial spaces, shall be pressure tested according to the manufacturer's specifications prior to backfilling the excavation.

1.13.4 After installation of the Tank and integral Piping is complete and prior to the initial use of the UST System, the entire system shall be tested in accordance with current industry standards and practices and in the following manner to ensure the system is tight:

1.13.4.1 All testing of UST Systems shall be accomplished by the Precision Test method described in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases* or other test approved by the Department which is of equivalent or superior accuracy; and

1.13.4.2 All testing of UST Systems shall be able to account for the effects of thermal expansion or contraction of Consumptive Use Heating Fuels, vapor pockets, Tank deformation, evaporation or condensation, temperature stratification in the UST and the location of the water table; and

1.13.4.3 The required Precision Tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer and current industry standards and practices.

1.13.5 The Department reserves the right to request confirmatory system tightness tests to verify any test results submitted by an Owner, Operator, or contractor.

1.13.6 Owners and Operators shall permit periodic inspection of the UST System installation by the Department.

1.13.7 During the installation of all new UST Systems, every stage of the construction shall be documented with photographs to demonstrate that the UST System was installed in compliance with the requirements for new UST Systems. Upon completion of the installation, copies of the photographs, as built plan, and required certification(s) as required in Part A, subsections 4.6.11 and 4.6.12 shall be submitted to the Department within thirty (30) Days of the completion of the UST System installation. The Facility Owner and Operator shall keep copies of all documents and photographs on file for the life of the UST System.

1.14 General Piping Installation Requirements for Consumptive Use Heating Fuel UST Systems

1.14.1 Piping shall be installed in accordance with the manufacturer's specifications.

1.14.2 The Piping layout shall be designed to minimize crossed Pipes and interference with conduit and other UST System components. If crossing of Pipes is unavoidable, clearance shall be provided to prevent contact of the pipes.

1.14.3 All Consumptive Use Heating Fuel and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot.

1.14.4 The Pipe joints shall be cut and deburred according to manufacturer's specifications to provide Liquid Tight seals.

1.14.5 When rigid Piping is used, flexible connector(s) shall be installed at the Tank end of each Consumptive Use Heating Fuel Pipe and vent Pipe as well as at the base of the vent riser on all new installations. Double elbow swing joints are prohibited.

1.14.6 All underground metal fittings, flexible connectors, joints, and pipes shall be isolated from contact with the soil.

1.14.7 For rigid or semi-rigid Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.14.8 For flexible plastic Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the replaced portion of an existing Piping Run is less than fifty percent (50%), the entire Pipe between two discrete end points shall be replaced. The Replacement Piping shall be from the same manufacturer and of the same specifications as the Pipe that is being replaced. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.15 UST Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

1.15.1 Underground Piping shall be protected from corrosion in accordance with accepted corrosion engineering practices and shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.15.1.1 NFPA 30, *Flammable and Combustible Liquids Code*.

1.15.1.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.15.1.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.15.1.4 UL Standard 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.15.1.5 UL Standard 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

1.15.1.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.15.2 Underground Piping systems shall be designed, constructed, and installed in a manner which will permit periodic tightness testing of the entire Piping system without the need for excavation and disassembly.

1.15.3 Acceptable designs for Underground Piping construction include fiberglass reinforced plastic and flexible plastic Piping.

1.15.4 Underground Piping burial depth shall provide at least six (6) inches of distance between the Piping and the trench excavation walls. The Piping trench excavation shall provide a minimum of six (6) inches of bedding and a minimum of eighteen (18) inches of compacted backfill material and pavement above the top of the Piping. Individual Piping Runs within the same Piping trench excavation shall be separated by a distance of at least twice the nominal Pipe diameter.

1.16 Fiberglass Reinforced Plastic and Flexible Plastic Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

1.16.1 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the manufacturer's specifications.

1.16.2 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the following industry codes, as applicable:

1.16.2.1 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.16.2.2 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

1.16.2.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.16.2.4 NFPA 30, F*lammable and Combustible Liquids Code.*

1.16.2.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.16.2.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.16.3 The construction materials, joints and joint adhesives of all fiberglass reinforced plastic and flexible plastic Pipes shall be compatible with the Regulated Substance Consumptive Use Heating Fuel and additives stored, soil and groundwater.

1.16.4 Pipes, fittings and adhesives shall be designed, fabricated, and factory tested in accordance with generally accepted structural, material and performance standards for underground Piping systems.

1.17 Suction Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

1.17.1 Suction Piping shall operate at less than atmospheric pressure and shall be designed, constructed, and installed to meet the requirements of Part C, subsection 1.17.1.1 or 1.17.1.2.

1.17.1.1 Safe suction Piping systems shall be designed and constructed in accordance with the following requirements:

1.17.1.1.1 The below grade Piping shall be constructed so that if suction is Released the contents of the pipe will drain back into the Tank; and

1.17.1.1.2 Only one (1) check valve shall be included in each suction Pipe; and

1.17.1.1.3 The check valve shall be located directly below and as close as practical to the suction pump.

1.17.1.2 Suction Piping systems with a foot valve (U.S. Suction) shall be designed and constructed in accordance with the following requirements:

1.17.1.2.1 The below grade Piping shall be constructed so that the Piping slopes back to the Tank; and

1.17.1.2.2 A foot valve is installed at the Tank.

1.18 General Piping Release Detection Requirements for UST Piping for Consumptive Use Heating Fuel UST Systems

1.18.1 Owners and Operators shall equip all underground Piping that routinely contains Consumptive Use Heating Fuel with a method, or combination of methods of Release Detection that can detect a Release from any portion underground Piping that routinely contains Consumptive Use Heating Fuel.

1.18.2 Statistical Inventory Reconciliation (SIR) methods are not approved for Piping Release Detection.

1.18.3 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Piping Release Detection equipment or method shows indication of a Release.

1.18.4 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s), inspection(s) of the UST Facility or an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

1.19 Pressurized Piping Release Detection Requirements for Consumptive Use Heating Fuel UST Systems

1.19.1 Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, including the primary and secondary Piping, in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.19.2 Owners and Operators of Consumptive Use Heating Fuel UST Systems that have underground pressurized Piping systems shall use a Piping tightness test method designed to detect a Release from any portion of the underground Piping system that routinely contains Consumptive Use Heating Fuels.

1.19.3 Piping Interstitial Monitoring Requirements

1.19.3.1 Owners and Operators of Consumptive Use Heating Fuel UST Systems with underground pressurized Piping systems constructed of double wall design shall utilize continuous interstitial monitoring systems that meet the following requirements:

1.19.3.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Consumptive Use Heating Fuel; and

1.19.3.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring equipment record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

1.19.3.1.3 Owners and Operators shall maintain records of the interstitial Release Detection for three (3) years; and

1.19.3.1.4 The interstitial monitoring device shall alert the Owner and Operator to the presence of a Release by shutting off the flow of Consumptive Use Heating Fuel; and

1.19.3.1.5 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part C, subsection 1.26; and

1.19.3.1.6 All Containment Sumps shall comply with the testing and monitoring requirements of Part C, subsection 1.25.

1.19.4 Continuous interstitial monitoring systems that comply with Part C, subsection 1.19.3 may be utilized to meet the annual piping tightness test requirements of Part C, subsections 1.19.1 and 1.19.2 after notification to the Department. This allowance shall not apply to UST Systems approved by the Department in accordance with Part C, subsection 1.4.1.

1.19.5 When there is a failure of any annual piping tightness test, conducted voluntarily or to meet the requirements of these Regulations, the test failure shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

1.20 Suction Piping Release Detection Requirements for Consumptive Use Heating Fuel UST Systems

1.20.1 Release Detection is not required for suction Piping that is designed and constructed to meet the requirements of Part C, subsection 1.17.1.1.

1.20.2 Suction Piping designed and constructed to meet the requirements of Part C, subsection 1.17.1.2 shall have Release Detection in accordance with Part C, subsection 1.19.3.

1.20.3 Owners and Operators of suction Piping that is designed and constructed in accordance with Part C, subsection 1.17.1.2 shall conduct a Line tightness test a minimum of once every three (3) years in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

1.21 Spill Prevention Requirements for Consumptive Use Heating Fuel UST Systems

1.21.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to spilling do not occur.

1.21.2 To prevent spilling associated with Consumptive Use Heating Fuel transfer to the UST System, Owners and Operators shall comply with the requirements of the following industry standards:

1.21.2.1 NFPA 30, *Flammable and Combustible Liquids Code*; or

1.21.2.2 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*; or

1.21.2.3 API RP 1621, *Bulk Liquid Stock Control at Retail Outlets*.

1.21.3 Owners and Operators shall equip all Consumptive Use Heating Fuel UST Systems with impervious spill containment devices that form a Liquid Tight seal around the fill Pipe connections.

1.21.4 All spill containment devices installed around the fill Pipe shall have a minimum containment capacity of fifteen (15) gallons.

1.21.5 Owners and Operators shall immediately upon discovery remove water, Consumptive Use Heating Fuel, or debris that accumulates in the spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state, and federal requirements. Owners and Operators shall maintain spill containment devices as to be capable of containing a spill of the containment design capacity at all times.

1.21.6 All precautions shall be taken to prevent Tank overfilling, spilling and dripping.

1.21.7 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part C, subsection 1.21.9.

1.21.8 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part C, subsection 1.21.9 and the interstitial sensors shall be tested in accordance with Part C, subsection 1.26.

1.21.9 Hydrostatic testing procedures shall meet the following requirements:

1.21.9.1 For post-construction hydrostatic testing, the spill bucket shall be completely filled with liquid and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.9.2 For periodic hydrostatic testing, the spill bucket shall be completely filled with liquid and held for one (1) hour. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.10 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

1.21.11 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22 Overfill Prevention Requirements for Consumptive Use Heating Fuel UST Systems

1.22.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to overfilling do not occur.

1.22.2 The Person In Charge of the transfer of Consumptive Use Heating Fuel to the UST shall adhere to proper safety precautions and procedures for transfer such as those found in NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids* and API RP 1621, *Bulk Liquid Stock Control at Retail Outlets* and shall comply with the following:

1.22.2.1 The Person In Charge of the transfer operation shall first check the UST to ensure that the volume available in the UST is greater than the volume of Consumptive Use Heating Fuel to be transferred to the UST before the transfer is made; and

1.22.2.2 During the transfer, the Person In Charge shall continuously monitor the transfer operation to prevent an Overfill Release; and

1.22.2.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer's specifications; and

1.22.2.4 At the conclusion of the transfer, the Person in Charge shall collect any Consumptive Use Heating Fuel that remains in the transfer hose in and shall ensure it is properly managed and does not reach the environment; and

1.22.2.5 The Person in Charge shall take all reasonable precautions to prevent spilling and dripping.

1.22.3 Owners and Operators shall install and maintain overfill prevention equipment that shall:

1.22.3.1 Automatically achieve partial shut off of flow into the UST when the UST is ninety-five percent (95%) full and complete shut off of flow at ninety-eight percent (98%) full; or

1.22.3.2 Alert the transfer operator when the UST is no more than ninety percent (90%) full by triggering a high-level audible and visual alarm.

1.22.3.3 Vent line flow restrictors (ball float valves) shall not be installed for overfill prevention after January 11, 2020.

1.22.3.4 Existing vent line flow restrictors (ball float valves) shall be removed not later than January 11, 2023 unless the following condition exists:

1.22.3.4.1 Vent line flow restrictors (ball float valves) may remain in place provided the overfill prevention equipment automatically achieves partial shut off of flow into the UST when the UST is eighty-five percent (85%) full and complete shut off of flow at eighty-eight percent (88%) full.

1.22.3.5 Vent line flow restrictors (ball float valves) shall not be used in conjunction with the high level alarm overfill prevention method specified in Part C, subsection 1.22.3.2.

1.22.4 UST Systems that receive pressurized deliveries require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention or automatic flow shut-off valve designed for pressurized deliveries.

1.22.5 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22.6 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. At a minimum, the inspection shall ensure that overfill prevention equipment is functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part C, subsection 1.22.3.

1.23 Fill Line Protection Requirements for Consumptive Use Heating Fuel UST Systems

1.23.1 Owners and Operators shall clearly mark all fill Lines for Consumptive Use Heating Fuel UST Systems to indicate the size of the Tank and the type of Consumptive Use Heating Fuel stored. These markings shall be as follows:

1.23.1.1 A label or permanent tag at the fill connection which states the size of the UST System and the specific type of Consumptive Use Heating Fuel stored; and

1.23.1.2 A color symbol system implemented according to the following requirements:

1.23.1.2.1 All fill covers shall be marked consistent with API RP 1637, *Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals*; and

1.23.1.2.2 A different color symbol shall be used for each type of Consumptive Use Heating Fuel or grade of substance being stored at the Facility.

1.23.2 Pipes and other openings not used for transfer of Consumptive Use Heating Fuel at the UST Facility shall not be painted any color which would be associated with the color symbol designated for marking the Consumptive Use Heating Fuel stored at the Facility. It is particularly important that openings with access to soil and ground water not be confused with Consumptive Use Heating Fuel fill Lines.

1.24 Corrosion Protection Operation and Maintenance Requirements for Consumptive Use Heating Fuel UST Systems

1.24.1 General Requirements

1.24.1.1 Owners and Operators of steel UST Systems with corrosion protection systems shall operate and maintain the system in accordance with the following industry standards:

1.24.1.1.1 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*; and

1.24.1.1.2 NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*.

1.24.1.1.3 NACE International SP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems*; and

1.24.1.1.4 NFPA 30, *Flammable and Combustible Liquids Code*; and

1.24.1.1.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.24.1.2 Owners and Operators of steel UST Systems with corrosion protection systems shall maintain and operate the corrosion protection system to continuously provide corrosion protection to the metal components of the UST System that routinely contain Consumptive Use Heating Fuel and are in contact with the ground to ensure that Releases due to corrosion are prevented for the life of the UST System.

1.24.1.3 Cathodic Protection systems shall be designed and installed to allow determination of the current operating status.

1.24.2 Sacrificial Anode Cathodic Protection System Operation and Maintenance Requirements

1.24.2.1 Owners and Operators shall test all UST Systems equipped with Sacrificial Anode Cathodic Protection systems for proper operation using standard corrosion engineering practices and in accordance with the following requirements:

1.24.2.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, NACE TM0101, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems* and the manufacturer's specifications, and shall include the following:

1.24.2.1.1.1 A minimum of three (3) voltage readings equally spaced along the center line, including both ends and center, for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) voltage readings equally spaced along the center line, including both ends, center and two intermediate locations for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

1.24.2.1.1.2 A minimum of one (1) voltage reading for every ten (10) feet of Piping.

1.24.2.2 All Sacrificial Anode Cathodic Protection systems that protect underground Facility components shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) months of installation and at least once every twelve (12) months thereafter.

1.24.2.3 The Sacrificial Anode Cathodic Protection system shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) weeks after underground work is performed at or near a site with a Sacrificial Anode Cathodic Protection system and once every twelve (12) months thereafter.

1.24.2.4 Owners and Operators shall Repair or replace the Sacrificial Anode Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the requirements of Part C, subsection 1.6 if the Sacrificial Anode Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) days of the discovery of the failure of the corrosion protection system.

1.24.2.5 Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of a Sacrificial Anode Cathodic Protection system.

1.24.2.6 The Department shall approve, in writing, all Cathodic Protection Repair or Retrofit plans prior to work commencing.

1.24.2.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

1.24.2.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the Sacrificial Anode Cathodic Protection system:

1.24.2.8.1 Results of one of the following:

1.24.2.8.1.1 The two (2) most recent Sacrificial Anode Cathodic Protection system tests including the failed test, or

1.24.2.8.1.2 The results of an internal assessment, or

1.24.2.8.1.3 The results of a third party approved integrity assessment; and

1.24.2.8.2 Records of the Tank Release Detection method from the date of the most recent passed Sacrificial Anode Cathodic Protection test.

1.24.2.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

1.24.2.10 Impressed Current Cathodic Protection systems shall not be utilized as a Repair, Upgrade or Retrofit for a failed Sacrificial Anode Cathodic Protection system after January 11, 2008.

1.24.2.11 The use of alternate methods of monitoring shall be those described in NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and shall only be used with prior written approval from the Department.

1.24.2.12 Owners and Operators shall maintain a record of the operation of Sacrificial Anode Cathodic Protection systems to demonstrate compliance with the requirements of this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

1.24.2.12.1 The results of all tests and inspections of the Sacrificial Anode Cathodic Protection system.

1.25 Containment Sump Testing Requirements for Consumptive Use Heating Fuel UST Systems

1.25.1 All Tank top, transition and any other Containment Sumps of single wall design utilized as part of a Release Detection system with sensors, shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part C, subsection 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.2 All Tank top, transition and any other Containment Sumps of single wall design not utilized as part of a Release Detection system shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part C, subsection 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.3 All Tank top, transition and any other Containment Sumps of double wall design with continuous monitoring of the interstitial space shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part C, subsection 1.25.4 and the interstitial sensors shall be tested in accordance with Part C, subsection 1.26.

1.25.4 All Tank top, transition and any other Containment Sump tightness testing shall be performed in accordance with the manufacturer's specifications or as directed by the Department. Hydrostatic testing procedures shall meet the following requirements:

1.25.4.1 For post-construction hydrostatic testing, the Containment Sump shall be completely filled and held for twenty-four (24) hours. For any measurable liquid level drop, the Containment Sump is considered non-Liquid Tight.

1.25.4.2 For periodic hydrostatic testing, the Containment Sump shall be filled to a minimum of four (4) inches above the highest penetration fitting or sump sidewall seam, whichever is higher. The liquid level shall be no less than twenty-four (24) inches from the bottom of the sump and held for a minimum of one (1) hour. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

1.25.4.3 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state and federal requirements.

1.25.5 All access manholes associated with Containment Sumps shall be sized such that the manhole skirt is sufficiently larger than the Containment Sump lid to allow adequate access to the sump and to allow for surface water drainage.

1.25.6 All Containment Sumps shall be installed and maintained as to be capable of being visually inspected at all times for evidence of a Release and shall not be filled with any material such as pea gravel or native soil, or the Containment Sump shall be continuously monitored for Releases.

1.25.7 Owners and Operators shall immediately upon discovery remove water, Consumptive Use Heating Fuel or debris that accumulates in any Containment Sump. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements.

1.26 Testing and Monitoring Procedures for Sump Sensors and Interstitial Sensors for Consumptive Use Heating Fuel UST Systems

1.26.1 All sensors utilized for Released Detection shall be equipped with an automatic audible or visual alert system and shall shut down the UST System in the event of an alarm.

1.26.2 Owners and Operators shall perform a functionality test of all sump and interstitial sensors at a minimum of once every twelve (12) months in accordance with the manufacturer's specifications or as directed by the Department to verify proper sensor operation.

1.26.3 All sensors installed in a sump or interstitial space for the purpose of detecting a Release from the UST System shall be installed directly on the bottom at the lowest point of the sump or interstitial space and in accordance with the manufacturer’s specifications such that the sensor is capable of detecting any accumulation of Consumptive Use Heating Fuel.

1.26.4 All sensors utilized for Release Detection shall be monitored for releases at a minimum of once every thirty (30) Days.

1.27 Repair, Retrofit and Upgrade Requirements for Consumptive Use Heating Fuel UST Systems

1.27.1 All Retrofits and Upgrades to existing UST Systems shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

1.27.1.1 All Repairs that require post-construction testing shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

1.27.1.2 All Repairs not meeting the requirements of Part C, subsection 1.27.1.1, shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations.

1.27.2 Owners and Operators shall report any unusual operating conditions to the Department in accordance with the requirements of Part E, subsection 1.2 of these Regulations.

1.27.3 All equipment installed after January 11, 2008 shall be installed, operated and maintained such that manufacturer's warranties are not voided.

1.27.4 Owners and Operators shall ensure that Repairs, Retrofits or Upgrades will prevent Releases due to structural failure or corrosion as long as the UST System is used to store Consumptive Use Heating Fuel.

1.27.5 Owners and Operators shall test the Cathodic Protection system in accordance with Part C, subsection 1.24 within six (6) weeks and once every twelve (12) months thereafter following the Repair of any Cathodically Protected UST System, to ensure it is operating properly.

1.27.6 UST System Owners and Operators shall maintain records for each Repair, Retrofit or Upgrade for their time of ownership or operation of the UST System.

1.27.7 After any Repair, Retrofit or Upgrade to an UST System, Owners and Operators shall have the applicable portions of the UST System tested in accordance with these Regulations or as directed by the Department before the UST System is placed into service.

1.27.8 Repairs to fiberglass reinforced plastic Tanks may be made only by the manufacturer or by its authorized representatives.

1.27.9 Owners and Operators may not Repair holes in Piping and fittings, but shall replace any piece of such Piping or fittings from which a Release has occurred. Replacement Piping and fittings shall meet all applicable Piping requirements in Part C, Section 1.0. Loose fittings and joints in Piping that have been tightened to eliminate leakage may be put back into service.

1.27.10 At any time during the course of a Repair, Retrofit or Upgrade there is an indication of a Release the requirements of Part E of these Regulations shall be followed.

1.27.11 At any time excavation of soil or removal of concrete, asphalt or other cover is required during the course of a Repair, Retrofit or Upgrade, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Repair, Retrofit or Upgrade of the UST System.

1.27.12 Within sixty (60) Days of completion of a Repair, Retrofit or Upgrade of an UST System Owners and Operators and UST Contractors shall submit documentation to the Department including the following:

1.27.12.1 Repair, Retrofit or Upgrade completion documentation; and

1.27.12.2 Results of sampling required in Part E of these Regulations or Part C, subsection 1.27.10; and

1.27.12.3 Results of any UST System tests required by the Department.

1.28 Routine Inspection Requirements for Consumptive Use Heating Fuel UST Systems

1.28.1 Owners and Operators shall conduct an inspection at an interval no less frequently than once every thirty (30) Days, unless specified in Part C, subsection 1.28.1.5 to monitor the condition of the UST System including all access ports, spill containment devices, transition sumps, and Containment Sumps. The routine inspection shall include at a minimum the following:

1.28.1.1 The removal of all Containment Sump and transition sump covers and visual inspection of the sump for any evidence of a Release of Consumptive Use Heating Fuel or intrusion of water; and

1.28.1.2 The inspection of all access ports and drop tubes to verify that the covers, caps, and adaptors are tightly sealed and equipment is free of debris or blockage; and

1.28.1.3 The removal of all spill containment device covers and inspection to ensure all spill containment devices, including spill containment devices located within multi-port Containment Sumps, are free of debris or blockage, liquid including water, or Consumptive Use Heating Fuel.

1.28.1.4 The inspection of all electronic, mechanical and hand held Release Detection equipment including automatic tank gauges, tank gauge sticks or groundwater bailers, for alarms, unusual operating conditions, operability and serviceability.

1.28.1.5 Submersible turbine pump Containment Sumps that are part of a Consumptive Use Heating Fuel UST System meeting the following requirements may be inspected no less frequently than once every twelve (12) months providing the following conditions are met:

1.28.1.5.1 UST System shall be equipped with continuous interstitial monitoring operated and maintained in accordance with Part C, subsection 1.19.3.

1.28.1.5.2 All product and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot in accordance with Part C, subsection 1.14.3.

1.28.1.5.3 All sump sensors utilized for Release Detection shall be operated, monitored and tested in accordance with Part C, subsection 1.26.

1.28.1.5.4 If at any time the UST system fails to meet the conditions specified in Part C, subsection 1.28.1.5, the Owner or Operator shall notify the Department that the submersible turbine pump Containment Sump inspection shall be at a frequency no less than once every thirty (30) Days as specified in Part C, subsection 1.28.1.

1.28.2 A record of all routine inspections shall be kept on file by Owners and Operators for a minimum of three (3) years and shall be made available to the Department upon request. The records shall at a minimum include the results of all inspections including any Repairs made.

1.28.3 If at any time during a routine inspection evidence of a Release of Consumptive Use Heating Fuel is discovered Owners and Operators shall follow the investigation requirements of Part E of these Regulations.

1.29 Internal Lining Requirements for Consumptive use Heating Fuel UST Systems

1.29.1 An internal lining shall not be utilized to meet corrosion protection requirements after January 11, 2008.

1.29.2 An internal lining may be added to an UST System storing Consumptive Use Heating Fuel to ensure the UST System is Compatible with the substance stored and to prevent the release of Consumptive Use Heating Fuel.

1.29.3 The internal lining installation, operation and Maintenance shall meet the following requirements:

1.29.3.1 The lining shall be installed in accordance with the following industry standards:

1.29.3.1.1 API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.*

1.29.3.1.2 NLPA Standard 631, *Chapter A, Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks.*

1.29.3.1.3 NLPA Standard 631, *Chapter B, Future Internal Inspection Requirements for Lined Tanks.*

1.29.3.2 The lined Tank shall be tested for tightness in accordance with Part C, subsection 2.9.6 and found to be tight before the Tank is put back into service.

11 DE Reg. 922 (01/01/08)

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

2.0 Installation, Operation and Maintenance Requirements for Consumptive Use Heating Fuel UST Systems Installed After May 14, 1993 and Prior to January 11, 2008

2.1 General Requirements for Consumptive Use Heating Fuel UST Systems

2.1.1 Owners and Operators shall ensure that all Consumptive Use Heating Fuel UST Systems with a capacity of greater than one thousand one hundred (1,100) gallons shall be designed, constructed, installed and operated in accordance with manufacturer's specifications, and accepted engineering practices and procedures; and in a manner which will prevent Releases of Consumptive Use Heating Fuels to the ground

waters, surface waters or soils of the State due to corrosion, structural failure, manufacturing defects, spills, and overfills for the Operational Life of the UST System.

2.1.2 The material used in the construction and lining of the Tank shall be Compatible with the substances to be stored in the UST System. All UST Systems installed prior to January 11, 2008 shall meet the requirements of this Section.

2.1.3 Components of the UST System shall be approved by Underwriters Laboratories or equivalent third party certified.

2.1.4 All Consumptive Use Heating Fuel UST Systems installed after January 11, 2008 shall be designed and installed in accordance with the Secondary Containment requirements in accordance with Part B, Section 1.4.

2.1.5 Bare steel UST Systems or steel UST Systems coated with asphalt are prohibited.

2.1.6 Owners and Operators shall install, operate and maintain all equipment such that manufacturer's warranties are not voided.

2.1.7 Consumptive Use Heating Fuel shall not be deposited into an UST System that is not in compliance with the financial responsibility requirements of Part F of these Regulations.

2.2 General Installation Requirements for Consumptive Use Heating Fuel UST Systems

2.2.1 Prior to the installation of any Consumptive Use Heating Fuel UST System with a storage capacity greater than one thousand one hundred (1,100) gallons, a site survey shall be initiated by the Facility Owner and Operator. The pre installation site survey shall be conducted to determine the locations of nearby buildings, underground utilities and sewer lines.

2.2.2 Private/public drinking water wells, rivers, streams, lakes, canals, wetlands, floodplains, State designated Natural Areas, and other environmentally sensitive locations shall be recorded and incorporated into the design of the UST System Facility.

2.2.3 Owners and Operators shall submit a written plan of the UST Facility to the Department and to any designated state or Local Government agency for approval thirty (30) Days before the installation. The scale of the plan shall be one (1) inch equals ten (10) feet or less and shall include the following:

2.2.3.1 Size and location of Tanks; and

2.2.3.2 Piping dimensions and layout; and

2.2.3.3 Dimensions and locations of vents, gauges and monitoring devices; and

2.2.3.4 Type of Consumptive Use Heating Fuel to be stored; and

2.2.3.5 Location of burner unit, as appropriate; and

2.2.3.6 Location of overfill device, spill prevention system and monitoring device; and

2.2.3.7 Materials of Tank(s) and Piping construction; and

2.2.3.8 Location of and access to check valves, flexible connectors, etc. and

2.2.3.9 Location of Cathodic Protection components and test stations; and

2.2.3.10 Location of utilities (both above and underground); and

2.2.3.11 Location of electrical service components; and

2.2.3.12 Details of hold-down pads or anchoring; and

2.2.3.13 Location of nearby private drinking water wells and surface water bodies; and

2.2.3.14 Survey results from Part C, subsection 2.2.1.

2.3 UST System Design Requirements for Consumptive Use Heating Fuel UST Systems

2.3.1 Acceptable designs for UST system construction include:

2.3.1.1 Cathodically Protected steel; or

2.3.1.2 Fiberglass-reinforced plastic; or

2.3.1.3 Steel fiberglass reinforced plastic composite; or

2.3.1.4 Composite coated; or

2.3.1.5 Cathodically Protected double walled steel; or

2.3.1.6 Double walled fiberglass reinforced plastic; or

2.3.1.7 Other equivalent design approved by the Department.

2.3.2 Consumptive Use Heating Fuel UST Systems shall be installed in accordance with these Regulations, the manufacturer's specifications, accepted engineering practices and the following industry standards:

2.3.2.1 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

2.3.2.2 NFPA 30, *Flammable and Combustible Liquids Code*.

2.3.2.3 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

2.4 Secondary Containment Design Requirements for Consumptive Use Heating Fuel UST Systems

2.4.1 The Department shall require Secondary Containment on any portion of the UST system where aquifers underlying the UST Facility are determined to need such protection, or where groundwater below the UST Facility is within a well head protection area, or where groundwater is susceptible to contamination in order to protect the safety, health, welfare and environment of the State.

2.4.2 Secondary Containment systems shall be designed, constructed and installed to:

2.4.2.1 Contain the Consumptive Use Heating Fuels Released from the UST system until they are detected and removed; and

2.4.2.2 Prevent the Release of Heating Fuel to the environment at any time during the Operational Life of the UST system; and

2.4.2.3 Be checked for evidence of a Release at least once every thirty (30) Days.

2.4.3 Secondary Containment systems may consist of one of the following:

2.4.3.1 A Cathodically Protected double walled steel Tank and double walled Piping; or

2.4.3.2 A double walled fiberglass reinforced plastic Tank and double walled Piping; or

2.4.3.3 A double walled fiberglass reinforced plastic composite Tank and double walled Piping.

2.5 Double Walled UST Design Requirements for Consumptive Use Heating Fuel UST Systems

2.5.1 Any of the acceptable UST system designs in Part C, subsection 2.3 may be fabricated in double walled construction in accordance with accepted engineering practice and industry standards.

2.5.2 A double walled Tank which is designed and manufactured in accordance with the following requirements satisfies the requirements for Secondary Containment in Part C, subsection 2.4 and the requirements for Release Detection set forth in Part C, subsection 2.9:

2.5.2.1 The interstitial space of the double walled Tank can be monitored for Releases; and

2.5.2.2 Outer jackets made of steel shall be coated as prescribed in subsection 2.6.2; and

2.5.2.3 There are no penetrations of any kind through the jacket to the Tank except top entry manholes and fittings; and

2.5.2.4 The outer jacket shall, at a minimum, cover the bottom eighty percent (80%) of the UST; and

2.5.2.5 The jacket shall able to contain a liquid or be able to contain a vacuum from the time of manufacture completion until the time of installation; and

2.5.2.6 All Tanks shall be equipped with a strike plate located beneath all Tank openings.

2.6 Cathodically Protected Steel UST Design Requirements for Consumptive Use Heating Fuel UST Systems

2.6.1 Cathodically Protected steel UST Systems shall be designed, constructed, installed and tested in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,* and the applicable industry standards, including the following:

2.6.1.1 API RP 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.*

2.6.1.2 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

2.6.1.3 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

2.6.1.4 UL 1746, *Standard for Safety: External Corrosion Protection Systems For Steel Underground Storage Tanks.*

2.6.1.5 STI-P3, *Specification for sti P3® System for External Corrosion Protection of Underground Steel Storage Tanks.*

2.6.2 The Tank shall be coated with a suitable Dielectric Material in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

2.6.3 Field-installed Cathodic Protection systems shall be designed and installed in accordance with manufacturer's specifications, accepted engineering practice and the requirements listed in this Section.

2.6.4 Each Cathodic Protection system shall include sufficient monitoring stations which enable Owners and Operators to check on the adequacy of the Cathodic Protection system.

2.6.5 UST Systems that are protected by Sacrificial Anodes shall be electrically insulated from the Piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to Consumptive Use Heating Fuel, additives, corrosive soils or groundwater.

2.6.6 UST Systems not protected by Sacrificial Anodes shall be factory coated with a material which will provide equivalent protection and corrosion resistance. The minimum finished coating thickness shall be consistent with applicable UL standards. Defects and any inadequacies in the coating shall be Repaired in accordance with the manufacturer's instructions and standard engineering practice.

2.7 Fiberglass Reinforced Plastic UST Design Requirements for Consumptive Use Heating Fuel UST Systems

2.7.1 Fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standard:

2.7.1.1 UL 1316, *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol Gasoline Mixtures.*

2.7.2 Fiberglass reinforced plastic UST Systems shall be of sufficient structural strength to withstand normal handling and underground use and shall be compatible with the Consumptive Use Heating Fuel and additives stored, corrosive soils and groundwater. Tank construction materials shall be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

2.7.3 Fiberglass reinforced plastic Tanks shall be tested for deflection in accordance with the manufacturer's requirements at the time of installation.

2.8 Steel with Non-Metallic Outer Shell UST Design Requirements for Consumptive Use Heating Fuel UST Systems

2.8.1 Steel fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

2.8.1.1 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

2.8.1.2 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

2.8.1.3 STI F-922, *Specification for Permatank®.*

2.8.1.4 STI F-894, ACT-100® *Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks.*

2.8.1.5 STI F-961, ACT-100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.*

2.8.1.6 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks.*

2.8.2 The coating shall not corrode under adverse underground electrolytic conditions and shall be Compatible with the Consumptive Use Heating Fuel and additives stored.

2.8.3 The coating shall be factory inspected for air pockets, cracks, blisters pinholes and electrically tested by a ten thousand (10,000) volts holiday test performed over one hundred percent (100%) of the surface for coating short circuits or coating faults or in accordance with the manufacturer's specifications.

2.8.4 Any defects shall be Repaired in accordance with standard engineering practice and manufacturer's requirements to assure compliance with industry standards.

2.9 Release Detection Requirements for UST Systems Storing Consumptive Use Heating Fuel

2.9.1 General Requirements for Heating Fuel Tank Release Detection

2.9.1.1 Owners and Operators of Consumptive Use Heating Fuel UST Systems shall provide a method, or combination of methods of Release Detection on all UST Systems that:

2.9.1.1.1 Utilizes a method or methods capable of detecting a Release from any portion of the Tank and the connected underground Piping that routinely contain Consumptive Use Heating Fuel at a minimum of once every thirty (30) Days; and

2.9.1.1.2 Is installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, including routine Maintenance and service checks for operability or running condition; and

2.9.1.1.3 Meets the performance standards for Release Detection in this Section, with any performance claims and their manner of determination described in writing by the equipment manufacturer

or installer. The method shall be capable of detecting the leak rate or quantity specified for Precision Testing, automatic tank gauging, Line leak detectors, and Line tightness testing methods specified in these Regulations with a probability of detection of at least 0.95 and a probability of false alarm no greater than 0.05; and

2.9.1.1.4 Is operational prior to Consumptive Use Heating Fuel being placed in the UST System.

2.9.1.2 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Release Detection equipment or method shows indication of a Release.

2.9.1.3 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require Tank tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

2.9.2 Methods of Release Detection for Tanks Storing Consumptive Use Heating Fuel

2.9.2.1 Owners and Operators shall monitor Consumptive Use Heating Fuel UST Systems for Releases through the use of at least one of the following Release Detection methods:

2.9.2.1.1 Interstitial monitoring at a minimum of once every thirty (30) Days; or

2.9.2.1.2 Automatic Tank gauge performing Tank tightness testing in accordance with Part C, subsection 2.9.5; or

2.9.2.1.3 Tank tightness test; or

2.9.2.1.4 Statistical Inventory Reconciliation (SIR).

2.9.3 Interstitial Monitoring Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

2.9.3.1 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 Consumptive Use Heating Fuel and also meets one of the following requirements:

2.9.3.1.1 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 Consumptive Use Heating Fuel.

2.9.3.1.2 For UST Systems with a secondary barrier within the Excavation Zone, the sampling or testing method can detect a Release between the UST System and the secondary barrier.

2.9.3.1.3 The secondary barrier around or beneath the UST System consists of artificially constructed Impervious Material so as to direct a Release of Consumptive Use Heating Fuel to the monitoring point and permit its detection.

2.9.3.1.4 The barrier is Compatible with the Consumptive Use Heating Fuel stored so that a Release from the UST System will not cause deterioration of the barrier allowing a Release to pass through undetected.

2.9.3.1.5 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.

2.9.3.1.6 Ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a Release can go undetected for more than thirty (30) Days.

2.9.3.1.7 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 are designed for use under such conditions.

2.9.3.1.8 For Tanks with an internally fitted liner, an automated device may be used to detect a Release between the inner wall of the Tank and the liner, and the liner shall be Compatible with the substance stored.

2.9.3.2 At a minimum of once every thirty (30) Days Owners and Operators shall inspect all interstitial monitoring devices utilized for Release Detection for evidence of a Release from the UST System and shall record the results.

2.9.3.3 The interstitial monitoring equipment shall be capable of producing a record of Release Detection monitoring results. Original test records or equivalent third party test reports that duplicate the ATG console settings and test programming shall be made available upon request.

2.9.3.4 Owners and Operators shall maintain records of the interstitial Release monitoring results for three (3) years.

2.9.3.5 Owners and Operators shall have all interstitial monitoring equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. The inspection shall at a minimum include:

2.9.3.5.1 Inspection of the console for printer operation if so equipped; and

2.9.3.5.2 Verification of the system setup values and battery backup; and

2.9.3.5.3 Verification of the test programming; and

2.9.3.5.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

2.9.3.5.5 Inspection and testing of all probes and interstitial sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

2.9.3.5.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

2.9.3.5.7 Correction of any problems found as a result of the required inspection.

2.9.3.5 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment for three (3) years and any Repairs performed as a result of the inspection for their time of ownership or operation of the UST system.

2.9.4 Automatic Tank Gauging Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

2.9.4.1 Tank tightness testing using automatic Tank gauging (ATG) shall meet the following requirements:

2.9.4.1.1 The ATG equipment can detect a 0.2 gallon per hour leak rate from any portion of the Tank that routinely contains Consumptive Use Heating Fuel; and

2.9.4.1.2 The ATG equipment shall be capable of producing a record of Release Detection test results; and

2.9.4.1.3 At a minimum of once every thirty (30) Days the ATG equipment shall perform a Release Detection test for each Tank and shall produce a record of each such test. Original test records or equivalent third party Release Detection test reports that duplicate the ATG console settings and test programming shall be made available upon request; and

2.9.4.1.4 Owners and Operators shall maintain a record of all Release Detection tests performed by the ATG equipment for three (3) years.

2.9.4.2 Owners and Operators shall have all ATG equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. The inspection shall at a minimum include:

2.9.4.2.1 Inspection of the ATG console for proper printer operation if so equipped; and

2.9.4.2.2 Verification of the system setup values and battery backup; and

2.9.4.2.3 Verification of the test programming; and

2.9.4.2.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

2.9.4.2.5 Inspection and testing of the magnetostrictive probes and sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

2.9.4.2.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

2.9.4.2.7 Correction of any problems found as a result of the required inspection.

2.9.4.2.8 Owners and Operators shall maintain records of the annual inspections of the ATG and any Repairs performed as a result of the inspection for three (3) years.

2.9.5 Observation Tube Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

2.9.5.1 Observation Tubes shall not be used to comply with the Release Detection requirements of Part C, subsection 2.9 after January 1, 2013.

2.9.6 Tank Tightness Test Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

2.9.6.1 Owners and Operators implementing this Release Detection option shall conduct a separate tightness test for each UST System. The test shall be conducted at least once every twelve (12) months.

2.9.6.2 All testing of UST Systems shall be conducted in accordance with the Precision Test methods and procedures specified in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*, or other test approved by the Department which is of equivalent or superior accuracy.

2.9.6.3 Testing of UST Systems shall utilize a method capable of detecting a Release of a Consumptive Use Heating Fuel at a rate of 0.1 gallons per hour with a probability of detection of 0.95 and a probability of false alarm of 0.05 from any part of the Tank which routinely contains Consumptive Use Heating Fuel. These methods are limited to those tests that account for the following, if applicable:

2.9.6.3.1 The presence of vapor pockets; and

2.9.6.3.2 The expansion or contraction of the Consumptive Use Heating Fuel, which includes any density considerations; and

2.9.6.3.3 Temperature stratification in the Tank; and

2.9.6.3.4 Evaporation; and

2.9.6.3.5 Pressure variations in the Tank; and

2.9.6.3.6 Deflection of the Tank ends; and

2.9.6.3.7 The location of the water table.

2.9.6.4 These tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer. The Person performing the test shall certify that the test procedure utilized takes into account the variables specified in Part C, subsection 2.9.6.3.

2.9.6.5 Owners and Operators of the UST System Facility shall retain a copy of the results of the Tank tightness tests for three (3) years.

2.9.6.6 If the UST System fails NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*, criteria Owners and Operators and the UST System test contractor shall report the Tank test failure to the Department within twenty-four (24) hours and shall submit a copy of the test results to the Department within seven (7) Days of the test failure. The UST System Tank tightness test failure shall be investigated in accordance with Part E, Section 2.0. The test results shall include at a minimum the following information:

2.9.6.6.1 The procedures used including any deviations from those recommended by the developer of the test procedure for the Release Detection method; and

2.9.6.6.2 The name of the company performing the test; and

2.9.6.6.3 The method used; and

2.9.6.6.4 The results of the test.

2.9.7 Monitor Well Release Detection Requirements for Tanks Storing Consumptive Use Heating Fuel

2.9.7.1 Monitor Wells shall not be used to comply with the Release Detection requirements of Part C, subsection 2.9 after January 1, 2013.

2.9.8 Statistical Inventory Reconciliation (SIR) Release Detection Requirements for Tanks Storing Regulated Substance

2.9.8.1 Statistical Inventory Reconciliation (SIR) Release Detection methods shall be based on the application of statistical principles to inventory data similar to those described in Part B, subsection 2.9.3 and shall meet the following requirements:

2.9.8.1.1 Report a quantitative result with a calculated leak rate in accordance with Part B, subsections 2.9.7.3 and 2.19.3.1;

2.9.8.1.2 Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within thirty (30) Days;

2.9.8.1.3 Use a threshold that does not exceed one-half the minimum detectable leak rate; and

2.9.8.1.4 The SIR reports shall be received by the Department within the thirty (30) Day monitoring period.

2.9.8.1.4.1 Any test results which are reported as a failure or inconclusive shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7)

Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0. The Department will make a determination whether to prohibit continued use of SIR as a Release Detection method after two (2) consecutive failures or inconclusive test results.

2.9.8.1.5 Qualitative SIR Release Detection methods will not be accepted after January 11, 2020.

2.9.8.1.6 Quantitative SIR Release Detection methods shall be third party certified.

2.10 Anchoring Requirements for UST Systems Storing Consumptive Use Heating Fuel UST Systems

2.10.1 Support and anchorage shall be provided for all new installations to avoid Tank flotation. Any of the following anchoring methods can be used to meet this requirement and shall be completed in accordance with the PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems:*

2.10.1.1 Reinforced concrete deadmen anchors; or

2.10.1.2 Bottom hold-down pad which consists of eight (8) inches of reinforced concrete that extends eighteen (18) inches beyond Tank sides and twelve (12) inches beyond each end; or

2.10.1.3 Reinforced concrete slab over Tank.

2.10.2 All exposed metallic components of hold down systems shall be Electrically Isolated and Cathodically Protected when the hold down system is required by the Department; adequate bed of backfill shall be provided between the Tank and concrete.

2.11 Backfill Requirements for Consumptive Use Heating Fuel UST Systems

2.11.1 Backfill material shall consist of sand, crushed rock or pea gravel. The material shall be clean, washed, inert, free flowing, homogeneous, well granulated, non corrosive, and free of debris, rock, ice, snow or organic material. Particle length of crushed rock or pea gravel shall be no more than one-eighth (1/8) inch to three-fourths (3/4) inch in size. Backfill material shall comply with the manufacturer's specifications. Mixing of backfill with native soil or foreign objects is prohibited.

2.11.2 The backfill depth shall be consistent with the requirements in PEI RP100*, Recommended Practices for Installation of Underground Liquid Storage Systems*.

2.12 Requirements for Installation of Consumptive Use Heating Fuel UST Systems In An Existing UST Facility

2.12.1 A new UST System installed in or near an existing or previous UST System shall meet the requirements of Part C, Section 1.0.

2.13 Tank and Piping Installation Inspection and Testing Requirements for Consumptive Use Heating Fuel UST Systems

2.13.1 Once on site all UST Systems materials and equipment shall be inspected for flaws, surface cracks, holes, large scrapes, blisters, indentations and other indications of damage. All defects and Repairs to the UST System shall be recorded and submitted together with a site completion report to the Department.

2.13.2 All Tank(s) shall be air pressure tested according to the manufacturer's specifications prior to installation of the Tank(s) into the excavation. For single walled Tank(s), the installer shall remove, dope and re install all factory plugs. The installer shall soap the exterior, particularly its seams and fittings and pressure test the Tank(s) using the manufacturer's specifications to watch for bubbles. For double walled Tanks testing shall be conducted according to the manufacturer's recommendations and accepted engineering practices.

2.13.3 After installation of the Tank and integral Piping is completed, the entire UST System shall be tested in accordance with current industry standards and practices and in the following manner to prove tightness prior to the initial use of the UST System:

2.13.3.1 All testing of UST Systems shall be accomplished by the Precision Test method described in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases* or other test approved by the Department which is of equivalent or superior accuracy.

2.13.3.2 All testing of UST Systems shall be able to account for the effects of thermal expansion or contraction of the Consumptive Use Heating Fuels, vapor pockets, Tank deformation, evaporation or condensation, and the location of the water table.

2.13.3.3 These tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer and with current industry standards and practices.

2.14 General Piping Installation Requirements for Consumptive Use Heating Fuel UST Systems

2.14.1 The Piping layout shall be designed to minimize crossed lines and interference with conduit and other UST System components. If crossing of lines is unavoidable, adequate clearance shall be provided to prevent contact.

2.14.2 When rigid Piping is used, flexible connector(s) shall be installed at the Tank end of each Consumptive Use Heating Fuel Pipe and vent Pipe as well as at the base of the vent riser on all new installations. Double elbow swing joints are prohibited. All double elbow swing joints shall be replaced with flexible connectors by January 1, 2011.

2.14.3 All Consumptive Use Heating Fuel and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot.

2.14.4 The pipe joints shall be cut accurately and deburred to provide Liquid Tight seals.

2.14.5 All underground metal Pipe, fittings, flexible connectors, joints, and pipes shall be coated or wrapped and shall have Cathodic Protection or otherwise be isolated from contact with the soil.

2.15 UST Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

2.15.1 Underground Piping shall be protected from corrosion in accordance with accepted corrosion engineering practices and shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

2.15.1.1 NFPA 30, *Flammable and Combustible Liquids Code;* and

2.15.1.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages;* and

2.15.1.3 NFPA 329, *Recommended Practices for Handling Releases of Flammable and Combustible Liquids and Gases.*

2.15.1.4 API RP 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.*

2.15.1.5 NACE RP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems.*

2.15.1.6 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids*.

2.15.1.7 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

2.15.1.8 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

2.15.2 Underground Piping systems shall be designed, constructed, and installed in a manner which will permit periodic tightness testing of the entire Piping system without the need for extensive excavation and disassembly.

2.15.3 Acceptable designs for Underground Piping construction include metallic, fiberglass reinforced plastic and flexible plastic Piping.

2.15.4 Use of metal Piping without either Sacrificial Anodes or impressed current Cathodic Protection is prohibited.

2.16 Metal Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

2.16.1 All metal Piping shall be coated or wrapped, and Cathodically Protected in the following manner:

2.16.1.1 The Piping is coated with a suitable Dielectric Material; and

2.16.1.2 Field installed Cathodic Protection systems are designed and installed in accordance with accepted engineering practice and standards established under this Section; and

2.16.1.3 Cathodically Protected Piping systems of the Sacrificial Anode type shall be designed and installed to permit measurement of structure to soil potential six (6) months after installation and at least once every twelve (12) months thereafter. If inadequate Cathodic Protection is indicated, the cause shall be determined, and necessary Repairs made in accordance with accepted engineering practices and one of the Standards contained in this Section within sixty (60) Days of the test; and

2.16.1.4 Impressed current systems shall be designed to allow determination of current operating status. The impressed current source cannot be de energized at any time including periods when the Facility is closed (except during power failures or during service work on the storage systems or the impressed current Cathodic Protection system), and it shall be equipped with a continuously operating meter to show that the system is working; and

2.16.1.5 Where a Sacrificial Anode or impressed current system is used, a monitor station to check on the adequacy of the Cathodic Protection system shall be installed and kept in proper working condition. If at any time the monitor station shows that the electrical current necessary to prevent

corrosion is not being maintained the cause shall be determined, and necessary Repairs shall be made in accordance with accepted engineering practices and one of the Standards contained in this Section within sixty (60) Days of the failure, and the Piping shall be tested for tightness in accordance with NFPA 329, *Recommended Practices for Handling Releases of Flammable and Combustible Liquids and Gases*; and

2.16.1.6 Except where Cathodic Protection is provided by impressed current, underground Piping systems shall have dielectric bushings, washers, sleeves or gaskets installed to electrically isolate the Piping system from the Tank and the dispenser. These dielectric connectors shall be chemically compatible with Consumptive Use Heating Fuel, additives, corrosive soils and groundwater; and

2.16.1.7 Cathodic Protection systems shall be maintained, operated, tested and Repaired in accordance with the requirements of Part C, subsection 2.25.

2.17 Fiberglass Reinforced Plastic and Flexible Plastic Piping Design Requirements for Consumptive use Heating Fuel UST Systems

2.17.1 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the manufacturer's specifications and the following industry standards, as applicable:

2.17.1.1 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

2.17.1.2 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

2.17.1.3 NFPA 30, *Flammable and Combustible Liquids Code.*

2.17.1.4 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

2.17.1.5 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

2.17.1.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

2.17.2 The construction materials, joints, and joint adhesives of all fiberglass reinforced plastic and flexible plastic pipes shall be Compatible with the Consumptive Use Heating Fuel any additives stored, soil, and groundwater.

2.17.3 Pipes, fittings, and adhesives shall be designed, fabricated, and factory tested in accordance with generally accepted structural, material, and performance standards for underground Piping systems.

2.18 Suction Piping Design Requirements for Consumptive Use Heating Fuel UST Systems

2.18.1 Suction Piping shall operate at less than atmospheric pressure and shall be designed, constructed, and installed to meet the requirements of Part C, subsections 2.18.1.1 or 2.18.1.2:

2.18.1.1 Safe suction Piping systems shall be designed and constructed in accordance with the following requirements:

2.18.1.1.1 The below grade Piping shall be constructed so that if suction is released the contents of the Pipe will drain back into the Tank; and

2.18.1.1.2 Only one (1) check valve shall be included in each suction Pipe; and

2.18.1.1.3 The check valve shall be located directly below and as close as practical to the suction pump; or

2.18.1.2 Suction Piping systems with a foot valve (U.S. Suction) shall be designed and constructed in accordance with the following requirements:

2.18.1.2.1 The below grade Piping shall be constructed so that the Piping slopes back to the Tank; and

2.18.1.2.2 A foot valve is installed at the Tank.

2.19 General Release Detection Requirements for UST Piping for Consumptive Use Heating Fuel UST Systems

2.19.1 Owners and Operators shall equip all underground Piping that routinely contains Consumptive Use Heating Fuels with a method, or combination of methods of Release Detection that can detect a Release from any portion of the underground Piping that routinely contains Consumptive Use Heating Fuel.

2.19.2 Statistical Inventory Reconciliation (SIR) methods shall be in accordance with Part C, subsection 2.9.8.

2.19.3 Release Detection methods not specified in this Section will be considered an alternative by the Department. A written request detailing the method or combination of methods proposed shall be submitted to the Department prior to installation for approval. Alternative methods shall meet the following requirements:

2.19.3.1 The method can detect a 0.1 gallon per hour leak rate or a Release of seventy-five (75) gallons within a month with a probability of detection of 0.95 or greater and a probability of false alarm of 0.05 or less; or

2.19.3.2 The method or a combination of methods or devices can detect a Release as effectively as any of the Release Detection methods allowed in Part C, subsection 2.20. If the method or a combination of methods or devices is approved, the Owner and Operator shall comply with any conditions imposed by the Department on its use to ensure the protection of human health, safety or the environment.

2.19.4 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Piping Release Detection equipment or method shows indication of a Release.

2.19.5 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

2.20 Pressurized Piping Release Detection Requirements for Consumptive Use Heating Fuel UST Systems

2.20.1 For Consumptive Use Heating Fuel UST Systems with single walled Piping or double walled Piping and no interstitial monitoring, Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, primary Piping only, in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

2.20.2 For Consumptive Use Heating Fuel UST Systems with double walled Piping and interstitial monitoring, Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, including the primary and secondary Piping, in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

2.20.3 Owners and Operators of Consumptive Use Heating Fuel UST Systems with underground pressurized Piping systems shall use a Piping tightness test method designed to detect a Release from any portion of the underground Piping system that routinely contains Consumptive Use Heating Fuels.

2.20.4 Piping Interstitial Monitoring Requirements

2.20.4.1 Owners and Operators of Consumptive Use Heating Fuel UST Systems with underground pressurized Piping systems constructed of double wall design may utilize continuous interstitial monitoring systems to comply with the Piping tightness test requirements in Part C, subsections 2.20.2 and 2.20.3 that meet the following requirements:

2.20.4.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Consumptive Use Heating Fuel; and

2.20.4.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the automatic Tank gauge record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

2.20.4.1.3 Owners and Operators shall maintain records of the interstitial Release Detection for three (3) years; and

2.20.4.1.4 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part C, subsection 2.27; and

2.20.4.1.5 All Containment Sumps shall comply with the testing and monitoring requirements of Part C, subsection 2.26.

2.20.5 Continuous interstitial monitoring systems that comply with Part C, subsection 2.20.4 may be utilized to meet the annual piping tightness test requirements of Part C, subsections 2.20.2 and 2.20.3 after notification to the Department. This allowance shall not apply to UST Systems approved by the Department in accordance with Part C, subsection 2.4.1.

2.20.6 When there is a failure of any annual piping tightness test, conducted voluntarily or to meet the requirements of these Regulations, the test failure shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

2.21 Suction Piping Release Detection Requirements for Consumptive Use Heating Fuel UST Systems

2.21.1 Release Detection is not required for suction Piping that is designed and constructed to meet the requirements of Part C, subsection 2.18.1.1.

2.21.2 Owners and Operators of Suction Piping that is designed and constructed in accordance with subsection 2.18.1.2 shall conduct a Line tightness test a minimum of once every three (3) years in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

2.21.3 Owners and Operators of Consumptive Use Heating Fuel UST Systems with underground suction Piping systems constructed of double wall design may utilize continuous interstitial monitoring systems to comply with the Release Detection requirements of Part C, subsection 2.19 and the Line tightness testing requirements of Part C, subsection 2.21.2 if the following requirements are met:

2.21.3.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to detect a Release from any portion of the Piping that routinely contains Consumptive Use Heating Fuel; and

2.21.3.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

2.21.3.1.3 Owners and Operators shall maintain records of the interstitial Release records for three (3) years; and

2.21.3.1.4 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part C, subsection 2.27; and

2.21.3.1.5 All Containment Sumps shall comply with the testing and monitoring requirements of Part C, subsection 2.26.

2.22 Spill Prevention Requirements for Consumptive Use Heating Fuel UST Systems

2.22.1 No Person shall construct, install, use or maintain any UST System without providing a reliable means of ensuring that Releases due to spilling do not occur.

2.22.2 To prevent spilling associated with Consumptive Use Heating Fuel transfer to the UST System, Owners and Operators shall comply with the requirements of the following industry standards:

2.22.2.1 NFPA 30, *Flammable and Combustible Liquids Code*; or

2.22.2.2 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids;* or

2.22.2.3 API RP 1621, *Bulk Liquid Stock Control at Retail Outlets*.

2.22.3 Owners and Operators shall equip Consumptive Use Heating Fuel UST Systems with an impervious spill containment device that forms a Liquid Tight seal around the fill Pipe. The spill containment device shall consist of one of the following:

2.22.3.1 Impervious Materials which form a seal around the UST fill Pipe with an optional drain leading to an overfill collection device; or

2.22.3.2 An impervious container surrounding the fill Pipe which will collect any overfill or spill and will allow the Consumptive Use Heating Fuel to drain back into the UST when there is sufficient ullage space.

2.22.4 Owners and Operators shall immediately upon delivery remove water, Consumptive Use Heating Fuel or debris that accumulates in the spill containment. Liquid and debris shall be properly disposed in accordance with all local, state, and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

2.22.5 All reasonable precautions shall be taken to prevent UST overfilling, spilling or dripping.

2.22.6 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part C, subsection 2.22.8.

2.22.7 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part C, subsection 2.22.8 and the interstitial sensors shall be tested in accordance with Part C, subsection 2.27.

2.22.8 Hydrostatic testing procedures shall meet the following requirements:

2.22.8.1 For post-construction hydrostatic testing, the spill bucket shall be completely filled with liquid and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

2.22.8.2 For periodic hydrostatic testing, the spill bucket shall be completely filled with liquid and held for one (1) hour. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

2.22.9 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

2.22.10 Owners and Operators shall report, investigate and clean up any spills in accordance with Part E of these Regulations.

2.23 Overfill Prevention Requirements for Consumptive Use Heating Fuel UST Systems

2.23.1 No Person shall construct, install, use, or maintain any UST System without providing a reliable means of ensuring that Releases due to overfilling do not occur.

2.23.2 The Person In Charge of the transfer of Consumptive Use Heating Fuel to the Tank shall adhere to proper safety precautions and procedures for transfer such as those found in NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids* or API RP 1621, *Bulk Liquid Stock Control at Retail Outlets* and shall comply with the following:

2.23.2.1 The Person In Charge of transfer operations shall first check the UST to ensure that the volume available in the UST is greater than the volume of Consumptive Use Heating Fuel to be transferred to the UST before the transfer is made; and

2.23.2.2 During the transfer, the Person In Charge shall continuously monitor the entire transfer operation to prevent an Overfill Release; and

2.23.2.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer's specifications; and

2.23.2.4 At the conclusion of the transfer, the Person In Charge shall collect any Consumptive Use Heating Fuel which remains in the transfer hose and shall ensure it is properly managed and does not reach the environment; and

2.23.2.5 The Person In Charge shall take all precautions to prevent spilling and dripping.

2.23.3 Owners and Operators shall install and maintain overfill prevention equipment that complies with one of the following:

2.23.3.1 For Consumptive Use Heating Fuel UST Systems with a two (2) inch fill, overfill prevention may consist of a delivery truck that is equipped with a deep fill nozzle that incorporates a whistle. The nozzle shall be set deep enough in the fill such that when the whistling stops the level of Consumptive Use Heating Fuel in the UST is no more than ninety percent (90%) of the capacity of the UST; or

2.23.3.2 Automatically achieve partial shut off of the flow into the UST when the UST is ninety-five percent (95%) full and complete shut off of flow at ninety-eight percent (98%) full; or

2.23.3.3 Alerts the transfer operator when the UST is no more than ninety percent (90%) full by triggering a high level audible and visual alarm.

2.23.3.4 Vent line flow restrictors (ball float valves) shall not be installed for overfill prevention after January 11, 2020.

2.23.3.5 Existing vent line flow restrictors (ball float valves) shall be removed not later than January 11, 2023 unless the following condition exists:

2.23.3.5.1 Vent line flow restrictors (ball float valves) may remain in place provided the overfill prevention equipment automatically achieves partial shut off of flow into the UST when the UST is eighty-five percent (85%) full and complete shut off of flow at eighty-eight percent (88%) full.

2.23.3.6 Vent line flow restrictors (ball float valves) shall not be used in conjunction with other methods of overfill prevention method specified in Part C, subsection 2.23.3.3.

2.23.4 UST Systems that receive pressurized deliveries require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention or an automatic flow shut-off valve designed for pressurized deliveries.

2.23.5 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

2.23.6 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. At a minimum, the inspection shall ensure that overfill prevention equipment is

functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part C, subsection 2.23.3.

2.24 Fill Line Protection Requirements for Consumptive Use Heating Fuel UST Systems

2.24.1 Owners and Operators shall clearly mark all fill Lines for UST Systems to indicate the size of the Tank and the type of Consumptive Use Heating Fuel stored. These markings shall be as follows:

2.24.1.1 A label or permanent tag at the fill connection which states the size of the UST System and the specific type of Consumptive Use Heating Fuel stored; and

2.24.1.2 A color symbol system shall be implemented according to the following requirements:

2.24.1.2.1 All fill covers shall be marked consistent with API RP 1637, Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals.

2.24.1.2.2 A different color symbol shall be used for each type of Consumptive Use Heating Fuel or grade of Consumptive Use Heating Fuel being stored at the Facility.

2.24.2 Pipes and other openings not used for transfer of Consumptive Use Heating Fuel at the UST Facility shall not be painted any color which would be associated with the color symbol designated for marking the Consumptive Use Heating Fuel stored at the Facility. It is particularly important that openings with access to soil and ground water not be confused with Consumptive Use Heating Fuel fill Lines.

2.25 Sacrificial Anode and Impressed Current Cathodic Corrosion Protection Requirements for Consumptive Use Heating Fuel UST Systems

2.25.1 General Requirements

2.25.1.1 Owners and Operators of steel UST Systems with corrosion protection systems shall install, operate and maintain the system in accordance with the following industry standards:

2.25.1.1.1 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*; and

2.25.1.1.2 NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*; and

2.25.1.1.3 NACE International SP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems; and*

2.25.1.1.4 NFPA 30, *Flammable and Combustible Liquids Code; and*

2.25.1.1.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

2.25.1.2 Owners and Operators of steel UST Systems with corrosion protection systems shall maintain and operate the corrosion protection system to continuously provide corrosion protection to the metal components of the UST System that routinely contain Consumptive Use Heating Fuel and are in contact with the ground to ensure that Releases due to corrosion are prevented for the life of the UST System.

2.25.1.3 Owners and Operators shall ensure the integrity of the UST System utilizing one of the following methods prior to the addition of a Cathodic Protection system to an existing UST System:

2.25.1.3.1 The Tank shall be internally inspected to ensure that the Tank is structurally sound and free of corrosion holes prior to installing the Cathodic Protection system; or

2.25.1.3.2 The Tank has been installed for less than ten (10) years and is monitored monthly for Releases in accordance with Part C, subsection 2.9; or

2.25.1.3.3 The Tank has been installed for less than ten (10) years and is assessed for corrosion holes by conducting two (2) Precision Tests that meet the requirements of Part C, subsection 2.9.6. The first Precision Test shall be conducted prior to installing the Cathodic Protection system. The second Precision Test shall be conducted between three (3) and six (6) months following the first operation of the Cathodic Protection system; or

2.25.1.3.4 A third party approved integrity assessment method approved by the Department.

2.25.2 Sacrificial Anode Cathodic Protection System Operation and Maintenance Requirements

2.25.2.1 Owners and Operators shall test all UST Systems equipped with Sacrificial Anode Cathodic Protection systems for proper operation using standard corrosion engineering practices and in accordance with the following requirements:

2.25.2.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, NACE TM0101, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,* and the manufacturer's specifications, and shall include the following:

2.25.2.1.1.1 A minimum of three (3) voltage readings equally spaced along the center line, including both ends and center, for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) voltage readings equally spaced along the center line, including both ends, center and two intermediate locations, for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

2.25.2.1.1.2 A minimum of one (1) voltage reading for every ten (10) feet of Piping.

2.25.2.2 All Sacrificial Anode Cathodic Protection systems that protect UST System components shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) months of installation and at least once every twelve (12) months thereafter.

2.25.2.3 The Sacrificial Anode Cathodic Protection system shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) weeks after underground work is performed at or near a site with a Sacrificial Anode Cathodic Protection system and once every twelve (12) months thereafter.

2.25.2.4 Owners and Operators shall Repair or replace the Sacrificial Anode Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the requirements of Part C, subsection 1.6 if the Sacrificial Anode Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes failure of any required reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the corrosion protection system.

2.25.2.5 UST System Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of a Sacrificial Anode Cathodic Protection system.

2.25.2.6 The Department shall approve, in writing, all Cathodic Protection repair or Retrofit plans prior to work commencing.

2.25.2.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

2.25.2.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the Sacrificial Anode Cathodic Protection system:

2.25.2.8.1 Results of one of the following:

2.25.2.8.1.1 The two (2) most recent Sacrificial Anode Cathodic Protection system tests including the failed test, or

2.25.2.8.1.2 The results of an internal assessment, or

2.25.2.8.1.3 The results of a third party approved integrity assessment; and

2.25.2.8.2 Records of the Tank Release Detection method from the date of the most recent passed Sacrificial Anode Cathodic Protection test; and

2.25.2.9 If the tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

2.25.2.10 The use of alternate methods of monitoring shall be those described in NACE RP 0285, *Corrosion Control of Underground Storage Tank Systems* by Cathodic Protection, and shall only be used with prior written approval from the Department.

2.25.2.11 Owners and Operators shall maintain a record of the operation of Sacrificial Anode Cathodic Protection systems to demonstrate compliance with the requirements of this Section. These

records shall be retained in a permanent record and shall at a minimum provide the following information:

2.25.2.11.1 The results of all tests and inspections of the Sacrificial Anode Cathodic Protection system.

2.25.2.12 Impressed current Cathodic Protection systems shall not be utilized as a Repair, Upgrade or Retrofit for a failed Sacrificial Anode Cathodic Protection system after January 11, 2008.

2.25.3 Impressed Current Cathodic Protection Operation and Maintenance Requirements

2.25.3.1 Owners and Operators shall test all UST Systems equipped with impressed current Cathodic Protection systems for proper operation using standard corrosion engineering practices in accordance with the following requirements:

2.25.3.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems,* and the manufacturer's specifications, and shall include the following:

2.25.3.1.1.1 A minimum of three (3) instant off voltage readings along the center line for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) instant off voltage readings along the center line for UST Systems greater than or equal to twenty thousand 20,000 gallons; and

2.25.3.1.1.2 A minimum of one (1) instant off voltage reading for every ten (10) feet of Piping.

2.25.3.2 Owners and Operators shall have all impressed current Cathodic Protection systems that protect underground components tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) months of installation and at least once every twelve (12) months thereafter.

2.25.3.3 Owners and Operators shall have all impressed current Cathodic Protection systems shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards within six (6) weeks after underground work is performed at or near a site with an impressed current Cathodic Protection system, and at least once every twelve (12) months thereafter.

2.25.3.4 Owners and Operators shall Repair or replace the impressed current Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* if the impressed current Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the impressed current corrosion protection system.

2.25.3.5 Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of an impressed current Cathodic Protection system.

2.25.3.6 The Department shall approve, in writing, all impressed current Cathodic Protection system Repair or Retrofit plans prior to work commencing.

2.25.3.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

2.25.3.8 The following information shall be submitted to the Department prior to Repairs or Retrofit of the impressed current Cathodic Protection system:

2.25.3.8.1 Results of one of the following:

2.25.3.8.1.1 The two (2) most recent impressed current Cathodic Protection system tests including the failed test, or

2.25.3.8.1.2 The results of an internal assessment, or

2.25.3.8.1.3 The results of a third party approved integrity assessment; and

2.25.3.8.2 Records of the Tank Release Detection method from the date of the most recent passed impressed current Cathodic Protection test; and

2.25.3.8.3 Records of required rectifier readings from the date of the most recent passed impressed current Cathodic Protection test.

2.25.3.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

2.25.3.10 The impressed current source cannot be de energized at any time including periods when the Facility is closed except during power failures or during service work on the UST Systems or the impressed current Cathodic Protection system.

2.25.3.11 The use of alternate methods of testing shall be those described in NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and shall only be used with prior written approval from the Department.

2.25.3.12 Owners and Operators shall record all rectifier readings once every thirty (30) Days. If the monthly rectifier reading demonstrates the impressed current Cathodic Protection is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations the procedures in Part C, subsection 2.25.3.4 shall be followed.

2.25.3.13 Owners and Operators shall have all impressed current Cathodic Protection systems inspected once every twelve (12) months by an individual certified by a nationally recognized industry standard setting organization and in accordance with Department. Inspection shall at a minimum include a check for electrical shorts, ground connections, meter accuracy, and circuit resistance. The effectiveness of isolating devices, continuity bonds, and insulators shall be evaluated during the annual surveys.

2.25.3.14 Owners and Operators shall maintain a record of the operation of impressed current Cathodic Protection systems to demonstrate compliance with the performance standards in this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

2.25.3.14.1 The results of all tests and inspections of the impressed current Cathodic Protection system; and

2.25.3.14.2 The rectifier readings as required in Part C, subsection 2.25.3.12.

2.26 Containment Sump Testing Requirements for Consumptive Use Heating Fuel UST Systems

2.26.1 When a sump with sensor is used to comply with the Piping Release Detection requirements of Part C, subsections 2.19, 2.20 or 2.21, the Tank top, transition and any other Containment Sump of a single wall design shall be Liquid Tight and shall be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part C, subsection 2.26.3 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

2.26.2 All Tank top, transition and any other Containment Sumps not utilized as part of a Release Detection system and of single wall design shall be Liquid Tight and shall be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part C, subsection 2.26.3 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

2.26.3 All Tank top, transition and any other Containment Sump tightness testing shall be performed in accordance with the manufacturer's specifications or as directed by the Department. Hydrostatic testing procedures shall meet the following requirements:

2.26.3.1 For post-construction hydrostatic testing, the Containment Sump shall be completely filled and held for twenty-four (24) hours. For any measurable liquid level drop, the Containment Sump is considered non-Liquid Tight.

2.26.3.2 For periodic hydrostatic testing, the Containment Sump shall be filled to a minimum of four (4) inches above the highest penetration fitting or sump sidewall seam, whichever is higher. The liquid level shall be no less than twenty-four (24) inches from the bottom of the sump and held for a minimum of one (1) hour. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

2.26.3.3 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state and federal requirements.

2.26.4 Owners and Operators shall immediately upon discovery remove water, Consumptive Use Heating Fuel or debris that accumulates in any Containment Sump. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements.

2.27 Testing and Monitoring Procedures for Sump and Interstitial Sensors for Consumptive Use Heating Fuel UST Systems

2.27.1 All sensors utilized for Release Detection shall be equipped with an automatic audible or visual alert system and shall shut down the UST System in the event of an alarm.

2.27.2 Owner and Operators shall perform a functionality test of all sump and interstitial sensors once every twelve (12) months in accordance with the manufacturer's specifications or as directed by the Department to verify proper sensor operation.

2.27.3 All sensors installed in a sump for the purpose of detecting a Release from the UST System shall be installed directly on the bottom at the lowest point of the sump and in accordance with manufacturer's specifications such that the sensor is capable of detecting any accumulation of Consumptive Use Heating Fuel.

2.27.4 All sensors utilized for Release Detection shall be monitored for releases at a minimum of once every thirty (30) Days.

2.28 Repair, Retrofit and Upgrade Requirements for Consumptive Use Heating Fuel UST Systems

2.28.1 All Retrofits and Upgrades to existing Consumptive Use Heating Fuel UST Systems shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

2.28.1.1 All Repairs that require post-construction testing shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

2.28.1.2 All Repairs not meeting the requirements of Part C, subsection 2.28.1.1, shall meet the applicable design, installation, Maintenance and operational standards in Part C, Section 1.0 of these Regulations.

2.28.2 Owners and Operators shall report any unusual operating conditions to the Department in accordance with the requirements of Part E, subsection 1.2 of these Regulations.

2.28.3 All equipment installed after January 11, 2008 shall be installed, operated and maintained such that manufacturer's warranties are not voided.

2.28.4 Owners and Operators shall ensure that Repairs, Retrofits or Upgrades will prevent Releases due to structural failure or corrosion as long as the UST System is used to store Consumptive Use Heating Fuel.

2.28.5 Owners and Operators shall test the Cathodic Protection system in accordance with Part C, subsection 2.25 within six (6) weeks and once every twelve (12) months thereafter following the Repair of any Cathodically Protected UST system to ensure it is operating properly.

2.28.6 Owners and Operators shall maintain records for each Repair, Retrofit or Upgrade their time of ownership or operation of the UST System.

2.28.7 After any Repairs, Retrofit or Upgrade to an UST System Owners and Operators shall have the applicable portions of the UST System tested in accordance with these Regulations, or as directed by the Department before the UST System is placed into service.

2.28.8 Repairs to fiberglass reinforced plastic Tanks may be made only by the manufacturer or by its authorized representatives.

2.28.9 Owners and Operators may not Repair holes in Piping and fittings, but shall replace any piece of such Piping or fittings from which a Release has occurred. Replacement Piping and fittings shall meet all applicable Piping requirements in Part C, Section 1.0. Loose fittings and joints in Piping that have been tightened to eliminate leakage may be put back into service.

2.28.10 At any time during the course of a Repair, Retrofit or Upgrade there is an indication of a Release the requirements of Part E of these Regulations shall be followed.

2.28.11 At any time excavation of soil or removal of concrete, asphalt or other cover is required during the course of a Repair, Retrofit or Upgrade, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate

for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Repair, Retrofit or Upgrade of the UST System.

2.28.12 Within sixty (60) Days of completion of a Repair, Retrofit or Upgrade of an UST System Owners and Operators and UST Contractors shall submit documentation to the Department including the following:

2.28.12.1 Repair, Retrofit or Upgrade completion documentation; and

2.28.12.2 Results of sampling required in Part E of these Regulations Part C, subsection 2.28.10; and

2.28.12.3 Results of any UST System tests required by the Department.

2.29 Routine Inspection Requirements for Consumptive Use Heating Fuel USTs

2.29.1 Owners and Operators shall conduct an inspection at an interval no less frequently than once every thirty (30) Days unless specified in Part C, subsection 2.29.1.5 to monitor the condition of the UST System including access ports, spill containment devices, transition sumps, and Containment Sumps. The routine inspection shall at a minimum include the following:

2.29.1.1 The removal of all Containment Sump and transition sump covers and visual inspection of the sump for any evidence of a Release of Consumptive Use Heating Fuel or intrusion of water; and

2.29.1.2 The inspection of all access ports and drop tubes to verify that the covers, caps and adaptors are tightly sealed and equipment is free of debris or blockage; and

2.29.1.3 The removal of all spill containment device covers and inspection to ensure all spill containment devices, including spill containment devices located within multi-port Containment Sumps, are free of debris or blockage, liquid, including water or Consumptive Use Heating Fuel.

2.29.1.4 The inspection of all electronic, mechanical and hand held Release Detection equipment including automatic Tank gauges, Tank gauge sticks or groundwater bailers, for alarms, unusual operating conditions, operability and serviceability.

2.29.1.5 Submersible turbine pump Containment Sumps that are part of a Consumptive Use Heating Fuel UST System may be inspected no less frequently than once every twelve (12) months providing the following conditions are met:

2.29.1.5.1 UST System shall be equipped with continuous interstitial monitoring operated and maintained in accordance with Part C, subsection 1.19.1 and Part C, subsection 1.19.3.

2.29.1.5.2 All product and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) inch per foot in accordance with Part C, subsection 2.14.3.

2.29.1.5.3 All sump sensors utilized for Release Detection shall be operated, monitored and tested in accordance with Part C, subsection 2.27.

2.29.1.5.4 If at any time the UST system fails to meet the conditions specified in Part C, subsection 2.29.1.5, the Owner or Operator shall notify the Department that the submersible turbine pump Containment Sump inspection shall be at a frequency no less than once every thirty (30) Days as specified in Part C, subsection 2.29.1.

2.29.2 A record of all routine inspections shall be kept on file by Owners and Operators for a minimum of three (3) years and shall be made available to the Department upon request. The records shall at a minimum include the results of all inspections including any Repairs made.

2.29.3 If at any time during a routine inspection evidence of a Release of Consumptive Use Heating Fuel is discovered Owners and Operators shall follow the investigation requirements of Part E of these Regulations.

2.30 Containment Sump Requirements for Non-Liquid Tight Access Structures for UST Systems Storing Consumptive Use Heating Fuel Installed or Existing Prior to January 11, 2008

2.30.1 All Tank top, transition and any other non-Liquid Tight access structures shall be prohibited after December 31, 2025. Containment Sumps shall be installed in accordance with Part C, Section 2.28 prior to and no later than December 31, 2025.

2.31 Internal Lining Requirements for Consumptive Use Heating Fuel UST Systems

2.31.1 An internal lining shall not be utilized to meet corrosion protection requirements after January 11, 2008.

2.31.2 An internal lining may be added to UST Systems to improve the ability of a Consumptive Use Heating Fuel UST System to prevent the release of Heating Fuel.

2.31.3 The internal lining installation, operation and Maintenance shall meet the following requirements:

2.31.3.1 The lining shall be installed in accordance with the following industry standards:

2.31.3.1.1 API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.*

2.31.3.1.2 NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks.*

2.31.3.1.3 NLPA Standard 631, Chapter B, *Future Internal Inspection Requirements for Lined Tanks.*

2.31.3.2 The lined Tank shall be tested for tightness in accordance with Part C, subsection 2.9.6 and found to be tight before the Tank is put back into service; and

2.31.3.3 Within ten (10) years after lining, and every five (5) years thereafter, Owners and Operators shall conduct an internal inspection of the lined Tank in accordance with NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks* and Chapter B, *Future Internal Inspection Requirements for Lined Tanks* and API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.* At the time of the inspection, the lined Tank shall be structurally sound and comply with the original design specifications. If any damage is found, Repairs shall be made in accordance with standard engineering practice, industry standards and the requirements of these Regulations or the Tank shall be replaced in accordance with the requirements in Part C, Section 1.0.

2.31.3.4 When an internally lined bare steel Tank is not inspected at a minimum in accordance with the intervals required in Part C, subsection 2.31.3.3 and subsequently fails an internal inspection the Tank shall be Removed or Closed In Place in accordance with these Regulations.

2.32 Additional Requirements for Consumptive Use Heating Fuel UST Systems installed prior to May 14, 1993

2.32.1 Not later than January 1, 1999, no Person shall own or operate a Consumptive Use Heating Fuel UST System with a capacity of greater than two thousand (2,000) gallons installed prior to May 14, 1993 that is not in compliance with the following:

2.32.1.1 The Tank Release Detection requirements of Part C, subsection 2.9; and

2.32.1.2 The Piping Release Detection requirements of Part C, subsections 2.19 and 2.20, or 2.21; and

2.32.1.3 The spill prevention requirements of Part C, subsection 2.22; and

2.32.1.4 The overfill prevention requirements of Part C, subsection 2.23; and

2.32.1.5 The fill Line protection requirements of Part C, subsection 2.24; and

2.32.1.6 One of the following:

2.32.1.6.1 UST System design requirements of Part C, subsection 2.3; or

2.32.1.6.2 UST System Cathodic Protection requirements of Part C, subsections 2.6 and 2.25; or

2.32.1.6.3 UST System Cathodic Protection requirements of Part C, subsections 2.6 and 2.25 and UST System Internal Lining requirements of Part C, subsection 2.31; or

2.32.1.6.4 The Removal or Closure In Place of the UST System in accordance with the requirements of Part C, Section 4.0 of these Regulations and the applicable hydrogeologic investigation and Remedial Action requirements of Part E of these Regulations.

11 DE Reg. 922 (01/01/08)

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

3.0 Change In Service Requirements for Consumptive Use Heating Fuel UST Systems

3.1 Owners and Operators shall notify the Department of all Changes In Service in accordance with the requirements of Part A, Section 4.0 of these Regulations.

3.2 General Requirements for Change In Service from In Service to Out Of Service for Consumptive Use Heating Fuel UST Systems

3.2.1 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part C, Sections 1.0 and 2.0 when a Consumptive Use Heating Fuel UST System is Out Of Service.

3.2.2 Owners and Operators shall continue operation and Maintenance of Release Detection in accordance with the applicable Release Detection requirements for Tanks and Piping in Part C, Sections 1.0 and 2.0 when a Consumptive Use Heating Fuel UST System is Out Of Service.

3.2.3 Owners and Operators shall continue to perform routine UST System testing in accordance with Part C, Section 1.0.

3.2.3.1 Leave vent Pipes open and functioning; and

3.2.3.2 Cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

3.2.4 Owners and Operators shall comply with the routine inspection requirements of Part C, subsections 1.28 or 2.29 when a Consumptive Use Heating Fuel UST System is Out Of Service.

3.3 General Requirements for Change In Service from Out Of Service to In Service for Consumptive Use Heating Fuel UST Systems

3.3.1 Prior to a Change In Service of a Consumptive Use Heating Fuel UST System from Out Of Service to In Service, Owners and Operators shall ensure that the Consumptive Use Heating Fuel UST System meets the following requirements prior to being placed In Service:

3.3.1.1 The Consumptive Use Heating Fuel UST System shall meet the requirements of Part C, Sections 1.0 or 2.0 as applicable; and

3.3.1.2 The Consumptive Use Heating Fuel UST System shall be tested for tightness as applicable; and

3.3.1.3 All Cathodically Protected Consumptive Use Heating Fuel UST Systems shall be tested and all necessary Repairs made in accordance with the requirements of Part C, subsection 2.25.

3.4 Change In Service Site Assessment Requirements for Consumptive Use Heating Fuel UST Systems

3.4.1 When a Consumptive Use Heating Fuel UST System is Out Of Service for twelve (12) months, Owners and Operators shall complete a Site Assessment designed to measure for the presence of a Release where contamination is most likely to be present. The Site Assessment is not restricted to the property containing the UST System. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

3.4.2 Owners and Operators shall submit the following documents to the Department within thirty (30) Days of the completion of the Site Assessment required in Part C, subsection 3.4.1:

3.4.2.1 A site plan detailing the UST(s) location and surrounding area; and

3.4.2.2 The approved Site Assessment plan with sampling points clearly marked; and

3.4.2.3 Chain of custody for all samples submitted for laboratory analysis; and

3.4.2.4 Results of any on-site screening performed; and

3.4.2.5 Laboratory test results for all samples submitted for laboratory analysis; and

3.4.2.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change In Service of the Consumptive Use Heating Fuel UST System, including manifests and receipts for soil, water, and Heating Fuel.

3.4.2.7 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part C, subsection 3.4.1, or by any other manner, Owners and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

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4.0 Removal or Closure in Place Requirements for Consumptive Use Heating Fuel UST Systems

4.1 Owners and Operators shall notify the Department of all Removals or Closures in Place in accordance with the requirements of Part A, Section 4.0 of these Regulations.

4.2 Removal or Closure in Place General Requirements for Consumptive Use Heating Fuel UST Systems

4.2.1 The Removal and Closure in Place procedures shall comply with the following industry standards:

4.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks*.

4.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

4.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces.*

4.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

4.3 Removal or Closure in Place Site Assessment Requirements for Consumptive Use Heating Fuel UST Systems

4.3.1 At the time of Removal of a Consumptive Use Heating Fuel UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to

be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Removal of the Consumptive Use Heating Fuel UST System.

4.3.2 At the time of Closure In Place of a Consumptive Use Heating Fuel UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be approved by the Department prior to implementation. The Site Assessment shall be completed within fourteen (14) Days of the Closure In Place of the Consumptive Use Heating Fuel UST System.

4.3.3 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part C, subsections 4.3.1 and 4.3.2, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

4.4 Removal or Closure in Place Recordkeeping Requirements for Consumptive Use Heating Fuel UST Systems

4.4.1 Owners and Operators shall submit the following documents to the Department within sixty (60) Days of the Removal or Closure in Place of a Consumptive Use Heating Fuel UST System:

4.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

4.4.1.2 A site map with sampling points clearly marked; and

4.4.1.3 Results of any on-site screening performed; and

4.4.1.4 Chain of custody for all samples submitted for laboratory analysis; and

4.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

4.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Removal of the UST System, including manifests and receipts for soil, water, and Consumptive Use Heating Fuel and the UST System disposal; and

4.4.1.7 Documentation of Tank cleaning prior to UST System Closure In Place.

4.5 Applicability to Previously Removed or Closed In Place Consumptive Use Heating Fuel UST Systems

4.5.1 When a Release is suspected from a previously Removed, Closed In Place or abandoned Consumptive Use Heating Fuel UST System, the Owner, Operator and Responsible Party shall comply with the requirements of Part E of these Regulations. If a Release is confirmed the Owner, Operator and Responsible Party shall Remove or Close In Place the Consumptive Use Heating Fuel UST System in accordance with all applicable requirements of these Regulations.

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5.0 Change In Substance Stored Requirements for Consumptive Use Heating Fuel UST Systems

5.1 Owners and Operators shall notify the Department of all Changes in Substance stored in accordance with the requirements of Part A, Section 4.0 of these Regulations.

5.2 Change In Substance Stored General Requirements for Consumptive Use Heating Fuel UST Systems

5.2.1 Before the Change In Substance Stored, Owners and Operators shall Empty and clean the Consumptive Use Heating Fuel UST System by removing all liquids and accumulated sludge in accordance with the following industry standards:

5.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks*.

5.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

5.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*.

5.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

5.3 Change In Substance Stored Site Assessment Requirements for Consumptive Use Heating Fuel UST Systems

5.3.1 Within thirty (30) Days of the completion of the cleaning of the Consumptive Use Heating Fuel UST System required in Part C, subsection 5.2, Owners and Operators shall complete a Site Assessment designed to measure for the presence of a Release where contamination is most likely to be present at the

Consumptive Use Heating Fuel UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

5.3.2 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part C, subsection 5.3.1, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

5.4 Change In Substance Stored Recordkeeping Requirements for Consumptive Use Heating Fuel UST Systems

5.4.1 Owners and Operators shall submit the following documents to the Department within thirty (30) Days of the Change In Substance Stored in an UST System:

5.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

5.4.1.2 The approved Site Assessment plan with sampling points clearly marked; and

5.4.1.3 Chain of custody for all samples submitted for laboratory analysis; and

5.4.1.4 Results of any on-site screening performed; and

5.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

5.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change In Substance Stored of the UST System, including manifests and receipts for soil, water, and Consumptive Use Heating Fuel.

6.0 Requirements for Empty UST Systems Storing Consumptive Use Heating Fuel

6.1 When any UST System is Empty:

6.1.1 Owners and Operators shall leave vent Pipes open and functioning, and cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

6.1.2 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part C, Sections 1.0 and 2.0 until the UST System is Removed or Closed In Place in accordance with Part C, Section 4.0.

6.1.3 Release Detection and Routine Inspection are not required.

6.2 Within three (3) months of rendering any UST System Empty, Owners and Operators shall complete a Site Assessment in accordance with Part C, subsection 3.4 or perform a Removal or a Closure In Place of the UST System in accordance with Part C, Section 4.0.

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Part D: Requirements for Installation, Operation and Maintenance of Underground Storage Tank Systems Storing Hazardous Substances

1.0 Installation, Operation and Maintenance Requirements for UST Systems Storing Hazardous Substance

1.1 General Requirements for UST Systems Storing Hazardous Substance

1.1.1 Owners and Operators shall ensure that all UST Systems installed for the storage of Hazardous Substance shall be designed, constructed, installed and operated in accordance with manufacturer's specifications, and accepted engineering practices and procedures; and in a manner which will prevent Releases of Hazardous Substances to the ground waters, surface waters or soils of the State due to corrosion, structural failure, manufacturing defects, spills and overfills for the Operational Life of the UST System.

1.1.2 The material used in the construction and lining of the UST System shall be Compatible with Hazardous Substances to be stored in the UST System.

1.1.3 Components of the UST System shall be approved by Underwriters Laboratories or equivalent third party certified.

1.1.4 All UST Systems Storing Hazardous Substance shall be designed and installed in accordance with the secondary containment requirements in accordance with Part D, subsection 1.4.

1.1.5 Bare steel UST Systems or steel UST Systems coated with asphalt are prohibited.

1.1.6 Owners and Operators shall install, operate and maintain all equipment such that manufacturer's warranties are not voided.

1.1.7 Hazardous Substance shall not be deposited into an UST System that is not in compliance with the financial responsibility requirements of Part F of these Regulations.

1.2 General Installation Requirements for UST Systems Storing Hazardous Substance

1.2.1 Prior to the installation of any Hazardous Substance UST System a site survey shall be initiated by the Facility Owner and Operator. The pre installation site survey shall be conducted to determine the locations of nearby buildings, underground utilities and sewer lines.

1.2.2 Private and public drinking water wells, rivers, streams, lakes, canals, wetlands, floodplains, State designated Natural Areas, and other environmentally sensitive locations shall be recorded and incorporated into the design of the UST System Facility.

1.2.3 UST Owners and Operators shall notify the Department at least thirty (30) Days prior to installation of all Hazardous Substance UST Systems. Notice shall include a site plan, the scale of which shall be one inch equals ten feet or less, and which shall at a minimum include the following:

1.2.3.1 The information determined from the pre-installation site survey in Part D, subsection 1.21; and

1.2.3.2 Size and location of Tanks including Tank dimensions, depth of cover, Empty Tank weight, Tank manufacturer and Tank type; and

1.2.3.3 The UST System installation location, streets, roads, other properties bordering the construction site; and

1.2.3.4 Piping dimensions and layout; and

1.2.3.5 Dimensions and locations of vents; and

1.2.3.6 Type of Hazardous Substance to be stored; and

1.2.3.7 Location of dispensers; and

1.2.3.8 Location of overfill device, spill prevention system and monitoring devices including dimensions of spill containment devices and sumps when applicable; and

1.2.3.9 Materials of construction for Tank(s), Pipes and associated appurtenances, including manufacturer name, model numbers and any manufacturers catalog information requested by the Department; and

1.2.3.10 Location of and access to check valves, anti-siphon valves, automatic Line leak detectors, and flexible connectors; and

1.2.3.11 Location of Cathodic Protection components and test stations; and

1.2.3.12 Location of utilities (both above and underground); and

1.2.3.13 Location of electrical service components; and

1.2.3.14 Details and dimensions of anchoring method including hold down pads, cover pads, or deadmen and electrical isolation methods associated with the anchoring system if applicable. Indicate on plan if area is subject to vehicle traffic; and

1.2.3.15 Map with the distance clearly labeled in feet from the UST System to all Domestic and Industrial wells and surface water bodies within one hundred and fifty (150) feet of the UST System.

1.2.4 After January 11, 2008, new Hazardous Substance UST Systems shall not be installed within a minimum distance of a one hundred and fifty (150) foot radius from Public or Industrial wells, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part D, subsection 1.2.4.

1.2.5 After January 11, 2008, new Hazardous Substance UST Systems shall not be installed within a minimum distance of a one hundred (100) foot radius from a Domestic Well, unless otherwise approved by the Department. A Retrofit or Upgrade of an UST System shall not be considered a new installation for the purposes of Part D, subsection 1.2.5.

1.3 UST System Designs for UST Systems Storing Hazardous Substance

1.3.1 Acceptable designs for Hazardous Substance UST System construction include:

1.3.1.1 Secondarily Contained Cathodically Protected steel; or

1.3.1.2 Secondarily Contained fiberglass reinforced plastic; or

1.3.1.3 Secondarily Contained steel with non-metallic or coated outer shell; or

1.3.2 UST Systems Storing Hazardous Substance shall be installed in accordance with these Regulations, the manufacturer's specifications, accepted engineering practices and the following industry standards:

1.3.2.1 PEI RP100, *Recommended Practices For Installation Of Underground Liquid Storage Systems*.

1.3.2.2 NFPA 30, *Flammable and Combustible Liquids Code.*

1.3.2.3 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.3.2.4 OSHA, 29 CFR, 1926 Subpart P, *Excavations.*

1.3.3 All Tanks shall be equipped with a strike plate located beneath all Tank openings.

1.4 Secondary Containment Design Requirements for UST Systems Storing Hazardous Substance

1.4.1 The Department shall require Secondary Containment on any portion of the UST System where aquifers underlying the UST Facility are determined to need such protection, or where groundwater below the UST Facility is within a well head protection area, or where groundwater is susceptible to contamination in order to protect the safety, health, welfare and environment of the State.

1.4.2 Secondary Containment systems shall be designed, constructed and installed to:

1.4.2.1 Contain the Hazardous Substances Released from the UST System until they are detected and removed; and

1.4.2.2 Prevent the Release of Hazardous Substances to the environment at any time during the Operational Life of the UST System; and

1.4.2.3 Be checked for evidence of a Release at least once every thirty (30) Days.

1.4.3 Secondary Containment systems shall include the following:

1.4.3.1 Double walled Tank; and

1.4.3.2 Double walled Hazardous Substance and vapor return Piping and, where required, vent Piping; and

1.4.3.3 Containment Sumps at the Tank top and under each dispenser that meet the requirements of Part D, subsection 1.25.

1.4.4 All Secondary containment systems shall be constructed in accordance with acceptable engineering practices, industry standards and shall have a Release Detection system in accordance with Part D, subsection 1.9.

1.5 Double Wall UST Design Requirements for UST Systems Storing Hazardous Substance

1.5.1 Acceptable UST system designs in Part D, subsection 1.3 shall be fabricated in double walled construction in accordance with accepted engineering practice and industry standards.

1.5.2 A double walled Tank which is designed and manufactured in accordance with the following requirements satisfies the requirements for Secondary Containment in Part D, subsection 1.4:

1.5.2.1 The interstitial space of the double walled Tank can be monitored for Releases; and

1.5.2.2 Outer jackets made of steel shall be coated as prescribed in Part D, subsection 1.6.2; and

1.5.2.3 There are no penetrations of any kind through the jacket to the Tank except top entry manholes and fittings; and

1.5.2.4 The outer jacket shall cover the entire circumference of the Tank; and

1.5.2.5 The jacket shall be able to contain a liquid or be able to contain a vacuum from the time of manufacture completion until the time of installation.

1.5.2.6 All Tanks shall be equipped with a strike plate beneath all Tank openings.

1.6 Cathodically Protected Steel UST Design Requirements for UST Systems Storing Hazardous Substance

1.6.1 Cathodically Protected steel UST Systems shall be designed, constructed, installed and tested in accordance with NACE Standard SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the applicable industry standards, including the following:

1.6.1.1 UL 58, *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

1.6.1.2 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

1.6.1.3 STI-P3, *Specification for sti-P3® System for External Corrosion Protection of Underground Steel Storage Tanks.*

1.6.1.4 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks.*

1.6.1.5 STI RP-972, *Recommended Practice for the Addition of Supplemental Anodes to sti-P3® Underground Storage Tanks.*

1.6.2 The Tank shall be coated with a suitable Dielectric Material in accordance with NACE Standard SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

1.6.3 Field-installed Cathodic Protection systems shall be designed, constructed, installed and tested in accordance with manufacturer's specifications, accepted engineering practice and the requirements listed in this Section.

1.6.4 Each Cathodic Protection system shall include sufficient monitoring stations to enable Owners and Operators to check on the adequacy of the Cathodic Protection system.

1.6.5 UST Systems that are protected by Sacrificial Anodes shall be electrically insulated from the Piping system with dielectric fittings, bushings, washers, sleeves or gaskets which are chemically stable when exposed to Hazardous Substance, additives, corrosive soils or groundwater.

1.7 Fiberglass Reinforced Plastic UST Design Requirements for UST Systems Storing Hazardous Substance

1.7.1 Fiberglass reinforced plastic UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standard:

1.7.1.1 UL 1316, *Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols and Alcohol Gasoline Mixtures.*

1.7.2 Fiberglass reinforced plastic UST Systems shall be of sufficient structural strength to withstand normal handling and underground use and shall be Compatible with the Hazardous Substance and additives stored, corrosive soils and groundwater. UST System construction materials shall be of sufficient density and strength to form a hard impermeable shell which will not crack, wick, wear, soften or separate under normal service conditions.

1.7.3 Fiberglass reinforced plastic Tanks shall be tested for deflection in accordance with the manufacturer's requirements at the time of installation.

1.8 Steel with Non-Metallic or Coated Outer Shell UST Design Requirements for UST Systems Storing Hazardous Substance

1.8.1 Steel with non-metallic or coated outer shell UST Systems shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.8.1.1 UL 1746, *Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.*

1.8.1.2 UL 58; *Standard for Steel Underground Tanks for Flammable and Combustible Liquids.*

1.8.1.3 STI F-922, *Specification for Permatank®.*

1.8.1.4 STI F-894, ACT -100® *Specification for Extern*al *Corrosion Protection of FRP Composite Steel Underground Storage Tanks*.

1.8.1.5 STI F-961, ACT -100U® *Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.*

1.8.1.6 STI F-841, *Standard for Dual Wall Underground Steel Storage Tanks.*

1.8.2 The coating shall not corrode under adverse underground electrolytic conditions and shall be Compatible with the Hazardous Substances and additives stored.

1.8.3 The coating shall be factory inspected for air pockets, cracks, blisters pinholes and electrically tested by a ten thousand (10,000) volts holiday test performed over one hundred percent (100%) of the surface for coating short circuits or coating faults or in accordance with the manufacturer's specifications.

1.8.4 Any defects shall be Repaired in accordance with standard engineering practice and the manufacturer's requirements.

1.9 Release Detection Requirements for UST Systems Storing Hazardous Substance

1.9.1 General Requirements

1.9.1.1 Owners and Operators of UST Systems shall provide a method, or combination of methods of Release Detection on all UST Systems that meet the following requirements:

1.9.1.1.1 Utilizes a method or methods capable of detecting a Release from any portion of the Tank and the connected underground Piping that routinely contain Hazardous Substance at a minimum of once every thirty (30) Days; and

1.9.1.1.2 Is installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications, including routine Maintenance and service checks for operability or running condition; and

1.9.1.1.3 Meets the performance standards for Release Detection in this Section, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. The method shall be capable of detecting the leak rate or quantity specified for

Precision Testing, automatic Tank gauging, Line leak detectors, and Line tightness testing methods specified in these Regulations with a probability of detection of at least 0.95 and a probability of false alarm no greater than 0.05; and

1.9.1.1.4 Is operational prior to Hazardous Substance being placed in the UST System.

1.9.1.1.5 Statistical Inventory Reconciliation (SIR) methods are not approved for Tank Release Detection.

1.9.1.2 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Release Detection equipment or method shows indication of a Release.

1.9.1.3 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s) and inspection(s) of the UST Facility and an indicated Release investigation in accordance with Part E of these Regulations at expense of Owners and Operators.

1.9.2 Methods of Release Detection for Tanks Storing Hazardous Substance

1.9.2.1 Owners and Operators shall monitor UST Systems for Releases through the use of inventory control procedures and at least one of the following Release Detection methods:

1.9.2.1.1 Continuous Interstitial Monitoring; or

1.9.2.1.2 Automatic tank gauge performing Tank tightness testing in accordance with Part D, subsection 1.9.5 for Tanks installed prior to January 11, 2008, that are unable by design to accommodate the continuous interstitial monitoring Release Detection method required in Part D, subsection 1.9.2.1.1.

1.9.3 Inventory Control Requirements for Tanks Storing Hazardous Substance

1.9.3.1 Inventory control procedures shall meet the following requirements:

1.9.3.1.1 Every Owner and Operator shall perform inventory control procedures and shall maintain inventory control records for each Tank containing a Hazardous Substance. Records shall be kept for each Tank, or cluster of Tanks if they are interconnected, and shall include measurements of bottom water levels, sales, use, deliveries, inventory on hand and losses or gains. Reconciliation of records shall be kept current, shall account for all variables which could affect an apparent loss or gain and shall be in accordance with generally accepted practices. The data shall be accumulated for each Day a Tank has Hazardous Substance added or withdrawn but not less frequently than once every seven (7) Days, and shall include as a minimum:

1.9.3.1.1.1 Description and amount of Hazardous Substance in the Tank measured in inches to the nearest one-eighth (1/8) of an inch. The equipment used shall be capable of measuring the level of Hazardous Substance over the full range of the Tank's height to the nearest one-eighth (1/8) of an inch. These measurements shall be converted from inches to gallons and these measurements and conversions shall be performed daily; and

1.9.3.1.1.2 Inputs and outputs of Hazardous Substance in gallons recorded daily; and

1.9.3.1.1.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer’s specifications; and

1.9.3.1.1.4 Hazardous Substance dispensing equipment is metered and recorded within the local standards for meter calibration or an accuracy of six (6) cubic inches for every five (5) gallons of substance withdrawn; and

1.9.3.1.1.5 Weekly assessment of the amount of water in the UST System. The measurement of water level in the bottom of the Tank shall be made to the nearest one-eighth (1/8) of an inch. If the measurement shows two (2) inches or more of water, the water shall be removed from the Tank within seven (7) Days. Water shall be properly disposed in accordance with all local, state and federal requirements; and

1.9.3.1.1.6 Daily reconciliation of the amount of Hazardous Substance added to and removed from the Tank. Recommended procedures for Tank inventory and reconciliation procedures are detailed in API Publication 1621, *Bulk Liquid Stock Control at Retail Outlets*, and shall include at a minimum:

1.9.3.1.1.6.1 Losses or gains from each Day's inventory shall be reconciled at the end of each calendar month; and

1.9.3.1.1.6.2 For any day in which there is a loss of five percent (5.0%) or more of the calculated daily inventory or for any month in which there is a significant loss or gain of Hazardous Substance that meets or exceeds one percent (1.0%) of the total monthly throughput plus one hundred and thirty (130) gallons, or any month in which there is an unexplainable consistent negative trend, the indicated Release investigation procedure in Part E of these Regulations shall be followed; and

1.9.3.2 Tanks equipped with automatic inventory control systems or continuously operating automatic tank gauging systems may use these devices to perform inventory reconciliation procedures; and

1.9.3.3 All automatic systems utilized for performing inventory procedures shall comply with the preventative maintenance program requirements of Part D, subsection 1.9.5.2.

1.9.3.4 In instances where the hazardous nature of the Hazardous Substance will not permit implementation of standard inventory procedures, alternative procedures such as continuously functioning automatic Tank gauging subject to the requirements of Part D, subsection 1.9.5 shall be implemented.

1.9.3.5 Failure to maintain and reconcile inventory control records may be cause for the Department to require UST System tightness test(s) and inspection(s) of the UST Facility at the expense of Owners and Operators.

1.9.4 Interstitial Monitoring Release Detection Requirements for Tanks Storing Hazardous Substance

1.9.4.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a leak from any portion of the Tank that routinely contains Hazardous Substance.

1.9.4.2 At a minimum of once every thirty (30) Days Owners and Operators shall inspect all interstitial monitoring devices utilized for Release Detection for evidence of a Release from the UST System and shall record the results.

1.9.4.3 The interstitial monitoring equipment shall be capable of producing a record of Release Detection monitoring results. Original test records or equivalent third party test reports that duplicate the ATG console settings and test programming shall be made available upon request.

1.9.4.4 Owners and Operators shall maintain records of the interstitial Release monitoring results for three (3) years.

1.9.4.5 Owners and Operators shall have all interstitial monitoring equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.4.5.1 Inspection of the console for proper printer operation if so equipped; and

1.9.4.5.2 Verification of the system setup values and battery backup; and

1.9.4.5.3 Verification of the test programming; and

1.9.4.5.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.4.5.5 Inspection and testing of all probes and interstitial sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.4.5.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.4.5.7 Correction of any problems found as a result of the required inspection.

1.9.4.6 Owners and Operators shall maintain records of the annual inspections of the interstitial monitoring equipment for three (3) years and any Repairs performed as a result of the inspection their time of ownership or operation of the UST System.

1.9.5 Automatic Tank Gauging Release Detection Requirements for Tanks Storing Hazardous Substance

1.9.5.1 Tank tightness testing using automatic Tank gauging (ATG) equipment shall meet the following requirements:

1.9.5.1.1 The ATG equipment can detect a 0.1 gallon per hour leak rate from any portion of the Tank that routinely contains Hazardous Substance; and

1.9.5.1.2 The ATG equipment shall be capable of producing a record of Release Detection test results; and

1.9.5.1.3 At a minimum of once every thirty (30) Days the ATG equipment shall perform a Release Detection test for each Tank and shall produce a record of such test. Original test records or equivalent third party Release Detection test reports that duplicate the ATG console settings and test programming shall be made available upon request; and

1.9.5.1.4 If used for inventory control, the ATG equipment shall be capable of conducting inventory control in accordance with Part D, subsection 1.9.3.

1.9.5.1.5 Owners and Operators shall maintain a record of all Release Detection tests performed by the ATG equipment for three (3) years.

1.9.5.2 Owners and Operators shall have all ATG equipment inspected by a certified technician once every twelve (12) months as part of a preventive Maintenance program to minimize in-service failures. Any equipment malfunctions identified as a result of the inspection shall be rectified immediately. The inspection shall at a minimum include:

1.9.5.2.1 Inspection of the ATG console for printer operation if so equipped; and

1.9.5.2.2 Verification of the system setup values and battery backup; and

1.9.5.2.3 Verification of the test programming; and

1.9.5.2.4 Verification of the operability of all warning and alarm indicator lights and audible alarms; and

1.9.5.2.5 Inspection and testing of the probes and sensors in accordance with the manufacturer's specifications or as directed by the Department to verify proper probe and sensor operation; and

1.9.5.2.6 Inspection of all cables that are visible during normal operating conditions for any cracking or swelling; and

1.9.5.2.7 Correction of any problems found as a result of the required inspection.

1.9.5.3 Owners and Operators shall maintain records of the annual inspections of the ATG and any Repairs performed as a result of the inspection for three (3) years.

1.10 Anchoring Requirements for UST Systems Storing Hazardous Substance

1.10.1 Support and anchorage shall be provided for all new installations to avoid Tank flotation and shall be installed in accordance with the PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.10.2 One or more of the following methods of anchorage shall be utilized:

1.10.2.1 Reinforced concrete deadmen anchors; or

1.10.2.2 Bottom hold-down pad which consists of eight (8) inches of reinforced concrete that extends eighteen (18) inches beyond Tank sides and twelve (12) inches beyond each end; or

1.10.2.3 Reinforced concrete slab over Tank.

1.10.3 All exposed metallic components of hold down systems shall be Electrically Isolated and Cathodically Protected when the hold down system is required by the Department.

1.11 Backfill Material Requirements for UST Systems Storing Hazardous Substance

1.11.1 Backfill material shall consist of sand, crushed rock or pea gravel. The material shall be clean, washed, inert, free flowing, homogeneous, well granulated, non corrosive, and free of debris, rock, ice, snow or organic material. Particle length or crushed rock or pea gravel shall be no less than one-eighth (1/8) inch and no more than three-fourths (3/4) inch in size. Backfill material shall comply with the Tank manufacturer's specifications. Mixing of backfill with native soil or foreign objects is prohibited.

1.11.2 The backfill depth shall be consistent with the requirements in PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.12 Requirements for Installation of Hazardous Substance UST Systems In An Existing UST Facility

1.12.1 If a new UST system shall be installed in or near an existing or previous UST System, Owners and Operators shall conduct a Site Assessment in accordance with Part D, subsections 1.28.10 and 1.28.11 and provide a means of Release Detection that shall detect any future Release from any portion of the UST System in accordance with Part D, subsections 1.9 and 1.18.

1.13 Tank and Piping Installation, Inspection and Testing Requirements for UST Systems Storing Hazardous Substance

1.13.1 Prior to installation Tank system materials and equipment shall be inspected for flaws, surface cracks, holes, large scrapes, blisters, indentations and other indications of damage. All defects and Repairs to the UST System shall be recorded and the record submitted with a site completion report to the Department.

1.13.2 All Tanks shall be air pressure tested according to the manufacturer's specifications prior to installation of the Tank or Tanks into the excavation. The installer shall soap the exterior, particularly its seams and fittings, and pressure test the Tank or Tanks using the manufacturer's specifications to locate and correct defects. Tank and interstitial space testing shall be conducted according to the manufacturer's recommendations and accepted engineering practices.

1.13.3 After installation all Piping, including all interstitial spaces, shall be pressure tested according to the manufacturer's specifications prior to backfilling the excavation.

1.13.4 After installation of the Tank and integral Piping is complete and prior to the initial use of the UST System, the entire system shall be tested in accordance with current industry standards and practices and in the following manner to ensure the system is tight:

1.13.4.1 All testing of UST Systems shall be accomplished by the Precision Test method described in NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases* or other test approved by the Department which is of equivalent or superior accuracy; and

1.13.4.2 All testing of UST Systems shall be able to account for the effects of thermal expansion or contraction of the Hazardous Substances, vapor pockets, Tank deformation, evaporation or condensation, temperature stratification in the UST and the location of the water table; and

1.13.4.3 The required Precision Tests shall be conducted by a Person trained and certified in the correct use of the necessary equipment, and shall be performed in accordance with the testing procedures and requirements established by the test system manufacturer and current industry standards and practices.

1.13.5 The Department reserves the right to request confirmatory system tightness tests to verify any test results submitted by an Owner, Operator, or contractor.

1.13.6 Owners and Operators shall permit periodic inspection of the UST System installation by the Department.

1.13.7 During the installation of all new UST Systems, every stage of the construction shall be documented with photographs to demonstrate that the UST System was installed in compliance with the requirements for new UST Systems. Upon completion of the installation, copies of the photographs, as built plan, and required certification(s) as required in Part A, subsections 4.6.11 and 4.6.12 shall be submitted to the Department within thirty (30) Days of the completion of the UST System installation. The Facility Owner and Operator shall keep copies of all documents and photographs on file for the life of the UST System.

1.14 General Piping Installation Requirements for UST Systems Storing Hazardous Substance

1.14.1 Piping shall be installed in accordance with the manufacturer's specifications.

1.14.2 The Piping layout shall be designed to minimize crossed lines and interference with conduit and other UST System components. If crossing of lines is unavoidable, clearance shall be provided to prevent contact of the Pipes.

1.14.3 All Hazardous Substance and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) of an inch per foot.

1.14.4 The Pipe joints shall be cut and deburred according to manufacturer's specifications to provide Liquid Tight seals.

1.14.5 When rigid Piping is used, flexible connector(s) shall be installed at the Tank end of each Hazardous Substance Pipe and vent Pipe as well as at the base of the vent riser on all new installations. Double elbow swing joints are prohibited.

1.14.6 All underground metal fittings, flexible connectors, joints, and pipes shall be isolated from contact with the soil.

1.14.7 For rigid or semi-rigid Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.14.8 For flexible plastic Piping, if fifty percent (50%) or more of an existing Piping Run is required to be removed, the entire Piping Run shall be replaced. For Tanks with multiple Piping Runs, this definition applies independently to each Piping Run. If the replaced portion of an existing Piping Run is less than fifty percent (50%), the entire Pipe between two discrete end points shall be replaced. The Replacement Piping shall be from the same manufacturer and of the same specifications as the Pipe that is being replaced. If the Piping to be replaced is no longer manufactured, then the entire Piping Run shall be replaced.

1.15 UST Piping Design Requirements for UST Systems Storing Hazardous Substance

1.15.1 Underground Piping shall be protected from corrosion in accordance with accepted corrosion engineering practices and shall be designed, constructed, installed and tested in accordance with the following industry standards, as applicable:

1.15.1.1 NFPA 30, *Flammable and Combustible Liquids Code*.

1.15.1.2 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages*.

1.15.1.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.15.1.4 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.15.1.5 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

1.15.1.6 PEI RP100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.15.2 Underground Piping systems shall be designed, constructed, and installed in a manner which will permit periodic tightness testing of the entire Piping system without the need for excavation and disassembly.

1.15.3 Acceptable designs for Underground Piping construction include fiberglass reinforced plastic and flexible plastic Piping.

1.15.4 Underground Piping burial depth shall provide at least six (6) inches of distance between the Piping and the trench excavation walls. The Piping trench excavation shall provide a minimum of six (6) inches of bedding and a minimum of eighteen (18) inches of compacted backfill material and pavement above the top of the Piping. Individual Piping Runs within the same Piping trench excavation shall be separated by a distance of at least twice the nominal Pipe diameter.

1.16 Fiberglass Reinforced Plastic and Flexible Plastic Piping Design Requirements for UST Systems Storing Hazardous Substance

1.16.1 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the manufacturer's specifications.

1.16.2 Fiberglass reinforced plastic and flexible plastic Piping shall be designed, constructed, installed and tested in accordance with the following industry codes, as applicable:

1.16.2.1 UL 971, *Standard for Nonmetallic Underground Piping for Flammable Liquids.*

1.16.2.2 UL 567, *Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas.*

1.16.2.3 NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.16.2.4 NFPA 30, *Flammable and Combustible Liquids Code.*

1.16.2.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.16.2.6 PEI RP 100, *Recommended Practices for Installation of Underground Liquid Storage Systems.*

1.16.3 The construction materials, joints and joint adhesives of all Fiberglass reinforced plastic and flexible plastic pipes shall be Compatible with the Hazardous Substance and additives stored, soil and groundwater.

1.16.4 Pipes, fittings and adhesives shall be designed, fabricated, and factory tested in accordance with generally accepted structural, material and performance standards for underground Piping systems.

1.17 Suction Piping Design Requirements for UST Systems Storing Hazardous Substance

1.17.1 Suction Piping shall operate at less than atmospheric pressure and shall be designed, constructed, and installed to meet the requirements of Part D, subsections 1.17.1.1 or 1.17.1.2:

1.17.1.1 Safe suction Piping systems shall be designed and constructed in accordance with the following requirements:

1.17.1.1.1 The below grade Piping shall be constructed so that if suction is Released the contents of the pipe will drain back into the Tank; and

1.17.1.1.2 Only one (1) check valve shall be included in each suction Pipe; and

1.17.1.1.3 The check valve shall be located directly below and as close as practical to the suction pump.

1.17.1.2 Suction Piping systems with a foot valve (U.S. Suction) shall be designed and constructed in accordance with the following requirements:

1.17.1.2.1 The below grade Piping shall be constructed so that the Piping slopes back to the Tank; and

1.17.1.2.2 A foot valve is installed at the Tank.

1.18 General Release Detection Requirements for UST Piping for UST Systems Storing Hazardous Substance

1.18.1 Owners and Operators shall equip all underground Piping that routinely contains Hazardous Substances with a method, or combination of methods of Release Detection that can detect a Release from any portion underground Piping that routinely contains Hazardous Substance.

1.18.2 Statistical Inventory Reconciliation (SIR) methods are not approved for Piping Release Detection.

1.18.3 Owners and Operators shall implement the indicated Release investigation procedure in Part E of these Regulations if the Piping Release Detection equipment or method shows indication of a Release.

1.18.4 Failure by Owners and Operators to maintain records of required Release Detection monitoring and inspection may be cause for the Department to require UST System tightness test(s), inspection(s) of the UST Facility or an indicated Release investigation in accordance with Part E of these Regulations at the expense of Owners and Operators.

1.19 Pressurized Piping Release Detection Requirements for UST Systems Storing Hazardous Substance

1.19.1 Line Leak Detector and Line Tightness Testing Requirements

1.19.1.1 Underground Piping that conveys Hazardous Substances under pressure shall be equipped with an automatic Line leak detector.

1.19.1.2 The automatic Line leak detector shall alert the Owner and Operator to the presence of a Release of a Hazardous Substance in accordance with subsection 1.19.1.2.1 or 1.19.1.2.2.

1.19.1.2.1 Mechanical automatic Line leak detectors shall be capable of restricting the flow of the Regulated Substance.

1.19.1.2.2 Electronic automatic Line leak detectors shall be capable of restricting the flow of the Regulated Substance. Electronic automatic Line leak detectors may be configured to shut down the UST System and trigger an audible or visual alarm.

1.19.1.3 Mechanical and Electronic automatic Line leak detectors shall be capable of reacting to leaks of three (3) gallons per hour at ten (10) pounds per square inch line pressure within one (1) hour.

1.19.1.4 Owners and Operators shall conduct an annual test of the operation of the automatic Line leak detector while installed in the UST System and under normal operating conditions. All Mechanical and Electronic automatic Line leak detectors shall pass a function test at least once every twelve (12) months at three (3) gallons per hour (gph) at ten (10) pounds per square inch line pressure within one (1) hour.

1.19.1.5 Owners and Operators shall conduct an annual tightness test of the entire pressurized underground Piping system, including the primary and secondary Piping, in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases.*

1.19.1.6 Owners and Operators of UST Systems with underground pressurized Piping systems shall use a Piping tightness test method designed to detect a Release from any portion of the underground Piping system that routinely contains Hazardous Substances.

1.19.2 Piping Interstitial Monitoring Requirements

1.19.2.1 Owners and Operators of Hazardous Substance UST Systems with underground pressurized Piping systems constructed of double wall design shall utilize continuous interstitial monitoring systems that meet the following requirements:

1.19.2.1.1 All interstitial monitoring devices shall be designed, constructed, installed and maintained to continuously detect a Release from any portion of the Piping that routinely contains Hazardous Substance; and

1.19.2.1.2 At a minimum of once every thirty (30) Days, Owners and Operators shall provide proof via the interstitial monitoring equipment record that the interstitial monitoring device is functioning in accordance with the manufacturer's specifications; and

1.19.2.1.3 Owners and Operators shall maintain records of the Piping interstitial Release Detection records for three (3) years; and

1.19.2.1.4 The interstitial monitoring system shall be designed and maintained to alert the Owner and Operator to the presence of a Release by shutting off the flow of the Hazardous Substance; and

1.19.2.1.5 All sump and interstitial sensors shall comply with the testing and monitoring requirements of Part D, subsection 1.27; and

1.19.2.1.6 All Containment Sumps shall comply with the testing and monitoring requirements of Part D, subsection 1.25.

1.19.2.2 Continuous interstitial monitoring systems that comply with Part D, subsection 1.19.2.1 may be utilized to meet the annual piping tightness test requirements of Part D, subsections 1.19.1.5 and 1.19.1.6 after notification to the Department. This allowance shall not apply to UST Systems approved by the Department in accordance with Part D, subsection 1.4.1.

1.19.2.3 When there is a failure of any annual piping tightness test, conducted voluntarily or to meet the requirements of these Regulations, the test failure shall be reported to the Department within twenty-four (24) hours by the Owner and Operator and the UST System test contractor. A copy of the test result(s) shall be sent to the Department within seven (7) Days of the test failure. The UST System tightness test failure shall be investigated in accordance with Part E, Section 2.0.

1.20 Suction Piping Release Detection Requirements for UST Systems Storing Hazardous Substance

1.20.1 Release Detection is not required for suction Piping that is designed and constructed to meet the requirements of Part D, subsection 1.17.1.1.

1.20.2 Suction Piping designed and constructed to meet the requirements of Part D, subsection 1.17.1.2 shall have Release Detection in accordance with Part D, subsection 1.19.2.1.

1.20.3 Owners and Operators of suction Piping that is designed and constructed in accordance with Part D, subsection 1.17.1.2 shall conduct a Line tightness test a minimum of once every three (3) years in accordance with NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

1.21 Spill Prevention Requirements for UST Systems Storing Hazardous Substance

1.21.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to spilling do not occur.

1.21.2 To prevent spilling associated with Hazardous Substance transfer to the UST System, Owners and Operators shall comply with the requirements of the following industry standards:

1.21.2.1 NFPA 30, *Flammable and Combustible Liquids Code*; or

1.21.2.2 NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids;* or

1.21.2.3 API RP1621, *Bulk Liquid Stock Control at Retail Outlets*.

1.21.3 Owners and Operators shall equip all UST Systems with impervious spill containment devices that form a Liquid Tight seal around the fill Pipe connection.

1.21.4 All spill containment devices installed around the fill Pipe shall have a minimum containment capacity of fifteen (15) gallons.

1.21.5 Owners and Operators shall immediately upon discovery remove water, Hazardous Substance or debris that accumulates in the spill containment device. Liquid and debris shall be properly disposed in accordance with all local, state, and federal requirements. Owners and Operators shall maintain spill containment devices to be capable of containing a spill of the containment design capacity at all times.

1.21.6 All precautions shall be taken to prevent Tank overfilling, spilling and dripping.

1.21.7 Spill containment devices of single wall design, including devices with replaceable inner buckets, shall be tested once every twelve (12) months for tightness in accordance with Part D, subsection 1.21.9.

1.21.8 Spill containment devices of double wall design with continuous monitoring of the interstitial space shall be tested once every twelve (12) months for tightness in accordance with Part D, subsection 1.21.9 and the interstitial sensors ~~are~~ shall be tested in accordance with Part D, subsection 1.27.

1.21.9 Hydrostatic testing procedures shall meet the following requirements:

1.21.9.1 For post-construction hydrostatic testing, the spill bucket shall be completely filled with liquid and held for twenty-four (24) hours. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.9.2 For periodic hydrostatic testing, the spill bucket shall be completely filled with liquid and held for one (1) hour. For any measurable liquid level drop, it is a failed test and the spill bucket is considered non-Liquid Tight.

1.21.10 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state, and federal requirements.

1.21.11 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22 Overfill Prevention Requirements for UST Systems Storing Hazardous Substance

1.22.1 No Person shall construct, install, use, or maintain any UST Facility without providing a reliable means of ensuring that Releases due to overfilling do not occur.

1.22.2 The Person In Charge of the transfer of Hazardous Substance to the UST shall adhere to proper safety precautions and procedures for transfer as found in NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids,* and API RP1621, *Bulk Liquid Stock Control at Retail Outlets*, and shall comply with the following:

1.22.2.1 The Person In Charge of the transfer operation shall first check the UST to ensure that the volume available in the UST is greater than the volume of Hazardous Substance to be transferred to the UST before the transfer is made; and

1.22.2.2 During the transfer, the Person In Charge shall constantly monitor the entire transfer operation to prevent an Overfill Release; and

1.22.2.3 All deliveries and measurements shall be made through a drop tube that extends to no more than six (6) inches from the Tank bottom and in accordance with manufacturer's specifications; and

1.22.2.4 At the conclusion of the transfer the Person in Charge shall collect, any Hazardous Substance that remains in the transfer hose and shall ensure it is properly managed and does not reach the environment; and

12.2.2.5 The Person in Charge shall take all reasonable precautions to prevent spilling and dripping.

1.22.3 Owners and Operators shall install and maintain overfill prevention that consists of equipment that shall:

1.22.3.1 Achieve partial shut off of the flow into the UST when the UST is ninety-five percent (95%) full and complete shut off of flow at ninety-eight percent (98%) full; or

1.22.3.2 Alert the transfer operator when the UST is no more than ninety percent (90%) full by triggering a high-level audible and visual alarm.

1.22.3.3 Vent line flow restrictors (ball float valves) shall not be installed for overfill prevention after January 11, 2020.

1.22.3.4 Existing vent line flow restrictors (ball float valves) shall be removed not later than January 11, 2023 unless the following condition exists:

1.22.3.4.1 Vent line flow restrictors (ball float valves) may remain in place provided the overfill prevention equipment automatically achieves partial shut off of flow into the UST when the UST is eighty-five percent (85%) full and complete shut off of flow at eighty-eight percent (88%) full.

1.22.3.5 Vent line flow restrictors (ball float valves) shall not be used in conjunction with the high level alarm overfill prevention method specified in Part D, subsection 1.22.3.2.

1.22.4 UST Systems that receive pressurized deliveries require a high level audible and visual alarm that is triggered at no more than ninety percent (90%) full for overfill prevention or an automatic flow shut-off valve designed for pressurized deliveries.

1.22.5 Owners and Operators shall report, investigate, and clean up any spills and overfills in accordance with Part E of these Regulations.

1.22.6 Owners and Operators shall ensure that overfill prevention equipment is inspected a minimum of once every three (3) years. At a minimum, the inspection shall ensure that overfill prevention equipment is functioning in accordance with manufacturer's specifications and shall activate at the correct level specified in Part D, subsection 1.22.3.

1.23 Fill Line Protection Requirements for UST Systems Storing Hazardous Substance

1.23.1 Owners and Operators shall clearly mark all fill Lines for UST Systems to indicate the size of the Tank and the type of Hazardous Substance stored. These markings shall be as follows:

1.23.1.1 A label or permanent tag at the fill connection which states the size of the UST and the specific type of Hazardous Substance stored; and

1.23.1.2 A color symbol system implemented according to the following requirements:

1.23.1.2.1 All fill and vapor recovery covers shall be marked consistent with API RP 1637, *Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals* or API IP 1542, *Identification Markings for Dedicated Aviation Fuel Manufacturing and Distribution Facilities, Airport Storage and Mobile Fuel Equipment*; and

1.23.1.2.2 A different color symbol shall be used for each type of Regulated Substance or grade of Hazardous Substance being stored at the Facility.

1.23.2 Pipes and other openings not used for transfer of Hazardous Substance at the UST Facility shall not be painted any color which would be associated with the color symbol designated for marking the Hazardous Substance or any other Regulated Substance stored at the Facility. It is particularly important that openings with access to soil and ground water not be confused with Hazardous Substance fill Lines.

1.24 Corrosion Protection Operation and Maintenance Requirements for UST Systems Storing Hazardous Substance

1.24.1 General Requirements

1.24.1.1 Owners and Operators of steel UST Systems with corrosion protection systems shall operate and maintain the system in accordance with the following industry standards:

1.24.1.1.1 NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.*

1.24.1.1.2 NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*; and

1.24.1.1.3 NACE International SP 0169, *Control of External Corrosion on Underground or Submerged Metallic Piping Systems*; and

1.24.1.1.4 NFPA 30, *Flammable and Combustible Liquids Code*; and

1.24.1.1.5 NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages.*

1.24.1.2 Owners and Operators of steel UST Systems with corrosion protection systems shall maintain and operate the corrosion protection system to continuously provide corrosion protection to the metal components of the UST System that routinely contain a Hazardous Substance and are in contact with the ground to ensure that Releases due to corrosion are prevented for the life of the UST System.

1.24.1.3 Cathodic Protection systems shall be designed and installed to allow determination of the current operating status.

1.24.2 Sacrificial Anode Cathodic Protection System Operation and Maintenance Requirements

1.24.2.1 Owners and Operators shall test all UST Systems equipped with Sacrificial Anode Cathodic Protection systems for proper operation using standard corrosion engineering practices and in accordance with the following requirements:

1.24.2.1.1 Testing procedures shall be done in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, NACE TM0101, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*, and the manufacturer's specifications, and shall include the following:

1.24.2.1.1.1 A minimum of three (3) voltage readings equally spaced along the center line, including both ends and center, for UST Systems less than twenty thousand (20,000) gallons and a minimum of five (5) voltage readings equally spaced along the center line, including both ends, center and two intermediate locations, for UST Systems greater than or equal to twenty thousand (20,000) gallons; and

1.24.2.1.1.2 A minimum of one (1) voltage reading for every ten (10) feet of Piping.

1.24.2.2 All Sacrificial Anode Cathodic Protection systems that protect underground Facility components shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) months of installation and at least once every twelve (12) months thereafter.

1.24.2.3 The Sacrificial Anode Cathodic Protection system shall be tested by an individual certified by a nationally recognized industry standard setting organization, and in accordance with Department standards, within six (6) weeks after underground work is performed at or near a site with a Sacrificial Anode Cathodic Protection system and once every twelve (12) months thereafter.

1.24.2.4 Owners and Operators shall Repair or replace the Sacrificial Anode Cathodic Protection system in accordance with NACE SP 0285, *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and the requirements of Part D, subsection 1.6, if the Sacrificial Anode Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations. This includes the failure of any required

reading to register a negative voltage of at least 0.85 volts for each UST. An individual certified by a nationally recognized industry standard setting organization shall determine the cause of the failure and make the necessary Repairs within sixty (60) Days of the discovery of the failure of the corrosion protection system.

1.24.2.5 UST System Owners and Operators shall notify the Department within forty-eight (48) hours of the discovery of the failure of a Sacrificial Anode Cathodic Protection system.

1.24.2.6 The Department shall approve, in writing, all Cathodic Protection Repair or Retrofit plans prior to work commencing.

1.24.2.7 If the Cathodic Protection system is not operating in accordance with the manufacturer's specifications and the requirements of these Regulations, the Department shall review the Release Detection and Cathodic Protection records of the UST System prior to Repair or Retrofit of the Cathodic Protection system. The Department may require that Owners and Operators determine the current integrity of the UST system.

1.24.2.8 The following information shall be submitted to the Department prior to Repair or Retrofit of the Sacrificial Anode Cathodic Protection system:

1.24.2.8.1 Results of one of the following:

1.24.2.8.1.1 The two (2) most recent Sacrificial Anode Cathodic Protection system tests including the failed test, or

1.24.2.8.1.2 The results of an internal assessment, or

1.24.2.8.1.3 The results of a third party approved integrity assessment; and

1.24.2.8.2 Records of the Tank Release Detection method from the date of the most recent passed Sacrificial Anode Cathodic Protection test.

1.24.2.9 If the Tank has an internal lining, no internal assessment results will be accepted for the purpose of determining the current integrity of the UST System.

1.24.2.10 Impressed current Cathodic Protection systems shall not be utilized as a Repair, Upgrade or Retrofit for a failed Sacrificial Anode Cathodic Protection system after January 11, 2008.

1.24.2.11 The use of alternate methods of monitoring shall be those described in NACE SP 0285 *External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection* and shall only be used with prior written approval from the Department.

1.24.2.12 Owners and Operators shall maintain a record of the operation of Sacrificial Anode Cathodic Protection systems to demonstrate compliance with the requirements of this Section. These records shall be retained in a permanent record and shall at a minimum provide the following information:

1.24.2.12.1 The results of all tests and inspections of the Sacrificial Anode Cathodic Protection system.

1.25 Containment Sump Testing Requirements for UST Systems Storing Hazardous Substance

1.25.1 All Tank top, transition and any other Containment Sumps of single wall design utilized as part of a Release Detection system with sensors, shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part D, subsection 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.2 All Tank top, transition and any other Containment Sumps of single wall design not utilized as part of a Release Detection system shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part D, subsection 1.25.4 and when deemed necessary by the Department to determine if a threat to human health, safety or the environment exists.

1.25.3 All Tank top, transition and any other Containment Sumps of double wall design with continuous monitoring of the interstitial space shall be Liquid Tight and be tested for Liquid Tightness once every thirty-six (36) months in accordance with Part D, subsection 1.25.4 and the interstitial sensors are tested in accordance with Part D, subsection 1.27.

1.25.4 All Tank top, transition and any other Containment Sump tightness testing shall be performed in accordance with the manufacturer's specifications or as directed by the Department. Hydrostatic testing procedures shall meet the following requirements:

1.25.4.1 For post-construction hydrostatic testing, the Containment Sump shall be completely filled and held for twenty-four (24) hours. For any measurable liquid level drop, the Containment Sump is considered non-Liquid Tight.

1.25.4.2 For periodic hydrostatic testing, the Containment Sump shall be filled to a minimum of four (4) inches above the highest penetration fitting or sump sidewall seam, whichever is higher. The liquid level shall be no less than twenty-four (24) inches from the bottom of the sump and held for a minimum of one (1) hour. For any measurable liquid level drop, it is a failed test and the Containment Sump is considered non-Liquid Tight.

1.25.4.3 Hydrostatic testing liquid shall be properly disposed in accordance with all local, state and federal requirements.

1.25.5 All access manholes associated with Containment Sumps shall be sized such that the manhole skirt is sufficiently larger than the Containment Sump lid to allow adequate access to the sump and allow for surface water drainage.

1.25.6 All Containment Sumps shall be installed and maintained as to be capable of being visually inspected at all times for evidence of a Release and shall not be filled with any material such as pea gravel or native soil, or the Containment Sump shall be continuously monitored for Releases.

1.25.7 Owners and Operators shall immediately upon discovery remove water, Hazardous Substance or debris that accumulates in any Containment Sump. Liquid and debris shall be properly disposed in accordance with all local, state and federal requirements.

1.26 Containment Sump Requirements for UST Systems Storing Hazardous Substance

1.26.1 Containment Sumps shall be designed and installed such that any Hazardous Substance accumulating within the sump is contained and conveyed to the Tank top sump via the Piping interstitial space where it shall be monitored and detected.

1.26.2 If equipped with a Containment Sump sensor, the sensor shall be equipped with an automatic audible or visual Release Detection alarm system.

1.27 Testing and Monitoring Procedures for Sump Sensors and Interstitial Sensors for UST Systems Storing Hazardous Substance

1.27.1 All sensors utilized for Release Detection shall be equipped with an automatic audible or visual alert system and shall shut down the UST System in the event of an alarm.

1.27.2 Owners and Operators shall perform a functionality test of all sump and interstitial sensors at a minimum of once every twelve (12) months in accordance with the manufacturer's specifications, or as directed by the Department to verify proper sensor operation.

1.27.3 All sensors installed in a sump or interstitial space for the purpose of detecting a Release from the UST System shall be installed directly on the bottom at the lowest point of the sump or interstitial space and in accordance with the manufacturer’s specifications such that the sensor is capable of detecting any accumulation of Hazardous Substance.

1.27.4 All sensors utilized for Release Detection shall be monitored for releases at a minimum of once every thirty (30) Days.

1.28 Repair, Retrofit and Upgrade Requirements for UST Systems Storing Hazardous Substance

1.28.1 All Retrofits or Upgrades to existing UST Systems shall meet the applicable design, installation, Maintenance and operational standards in Part D, Section 1.0 of these Regulations ~~or~~ and shall be approved by the Department prior to installation.

1.28.1.1 All Repairs that require post-construction testing shall meet the applicable design, installation, Maintenance and operational standards in Part D, Section 1.0 of these Regulations and shall be approved by the Department prior to installation.

1.28.1.2 All Repairs not meeting the requirements of Part D, subsection 1.28.1.1, shall meet the applicable design, installation, Maintenance and operational standards in Part D, Section 1.0 of these Regulations.

1.28.2 Owners and Operators shall report any unusual operating conditions to the Department in accordance with the requirements of Part E, subsection 1.2 of these Regulations.

1.28.3 All equipment installed after January 11, 2008 shall be installed, operated and maintained such that manufacturer's warranties are not voided.

1.28.4 Owners and Operators shall ensure that Repairs, Retrofits or Upgrades will prevent Releases due to structural failure or corrosion as long as the UST System is used to store Hazardous Substance.

1.28.5 Owners and Operators shall test the Cathodic Protection system in accordance with Part D, subsection 1.24 within six (6) weeks and once every twelve (12) months thereafter following the Repair of any Cathodically Protected UST System, to ensure it is operating properly.

1.28.6 Owners and Operators shall maintain records for each Repair, Retrofit or Upgrade for their time of ownership or operation of the UST System.

1.28.7 After any Repair, Retrofit or Upgrade to an UST System, Owners and Operators shall have the applicable portions of the UST System tested in accordance with these Regulations, or as directed by the Department, before the UST System is placed into service.

1.28.8 Repairs to fiberglass reinforced plastic Tanks may be made only by the manufacturer or by its authorized representatives.

1.28.9 Owners and Operators may not Repair holes in Piping and fittings, but shall replace any piece of such Piping or fittings from which a Release has occurred. Replacement Piping and fittings shall meet all applicable Piping requirements in Part D, Section 1.0. Loose fittings and joints in Piping that have been tightened to eliminate leakage may be put back into service.

1.28.10 At any time during the course of a Repair, Retrofit or Upgrade there is an indication of a Release the requirements of Part E of these Regulations shall be followed.

1.28.11 At any time excavation of soil or removal of concrete, asphalt or other cover is required during the course of a Repair, Retrofit or Upgrade, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Repair, Retrofit or Upgrade of the UST System.

1.28.12 Within sixty (60) Days of completion of a Repair, Retrofit or Upgrade of an UST System Owners and Operators and UST Contractors shall submit documentation to the Department including the following:

1.28.12.1 Repair, Retrofit or Upgrade completion documentation; and

1.28.12.2 Results of sampling required in Part E of these Regulations or Part D, subsection 1.28.10; and

1.28.12.3 Results of any UST System tests required by the Department.

1.29 Routine Inspection Requirements for UST Systems Storing Hazardous Substance

1.29.1 Owners and Operators shall conduct an inspection at an interval no less frequently than once every thirty (30) Days, unless otherwise specified in Part D, subsection 1.29.1.6, to monitor the condition of the UST System including all Dispensers, Dispenser sumps, access ports, spill containment devices, transition sumps and Containment Sumps. The routine inspection shall at a minimum include the following:

1.29.1.1 The removal of all Dispenser covers and visual inspection for any evidence of a Release of Hazardous Substance and inspection of all fittings, couplings and filters; and

1.29.1.2 The removal of all Containment Sump and transition sump covers and visual inspection of the sump for any evidence of a Release of Hazardous Substance or intrusion of water; and

1.29.1.3 The inspection of all access ports and drop tubes to verify that the covers, caps and adaptors are tightly sealed and equipment is free of debris or blockage; and

1.29.1.4 The removal of all spill containment device covers and inspection to ensure all spill containment devices, including spill containment devices located within multi-port Containment Sumps, are free of debris or blockage, liquid, including water or Hazardous Substance.

1.29.1.5 The inspection of all electronic, mechanical and hand held Release Detection equipment including automatic tank gauges, tank gauge sticks or groundwater bailers, for operability and serviceability.

1.29.1.6 Submersible turbine pump Containment Sumps that are part of a Hazardous Substance UST System meeting the following requirements may be inspected no less frequently than once every twelve (12) months providing the following conditions are met:

1.29.1.6.1 UST System shall be equipped with continuous interstitial monitoring operated and maintained in accordance with Part D, subsection 1.19.1 and Part D, subsection 1.19.2.

1.29.1.6.2 All product and vent Piping shall slope back to the Tank with a minimum slope of one-eighth (1/8) of an inch per foot in accordance with Part D, subsection 1.14.3.

1.29.1.6.3 All sump sensors utilized for Release Detection shall be operated, monitored and tested in accordance with Part D, subsection 1.27.

1.29.1.6.4 If at any time the UST system fails to meet the conditions specified in Part D, subsection 1.29.1.6, the Owner or Operator shall notify the Department that the submersible turbine pump Containment Sump inspection shall be at a frequency no less than once every thirty (30) Days as specified in Part D, subsection 1.29.1.

1.29.2 A record of all routine inspections shall be kept on file by Owners and Operators for a minimum of three (3) years and shall be made available to the Department upon request. The records shall at a minimum include the results of all inspections including any Repairs made.

1.29.3 If at any time during a routine inspection evidence of a Release of Hazardous Substance is discovered Owners and Operators shall follow the investigation requirements of Part E of these Regulations.

1.30 Internal Lining Requirements for UST Systems Storing Hazardous Substance

1.30.1 An internal lining shall not be utilized to meet corrosion protection requirements after January 11, 2008.

1.30.2 An internal lining may be added to an UST System to ensure the UST System is Compatible with the substance stored and to prevent the release of Hazardous Substance.

1.30.3 The internal lining installation, operation and maintenance shall meet the following requirements:

1.30.3.1 The lining shall be installed in accordance with the following industry standards:

1.30.3.1.1 API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.*

1.30.3.1.2 NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks.*

1.30.3.1.3 NLPA Standard 631, Chapter B, *Future Internal Inspection Requirements for Lined Tanks.*

1.30.3.2 The lined Tank shall be tested for tightness in accordance with Part B, subsections 2.9.7.2, 2.9.7.3, 2.9.7.4, 2.9.7.5 and 2.9.7.6 and found to be tight before the Tank is put back into service; and

1.30.3.3 Within ten (10) years after lining, and every five (5) years thereafter, Owners and Operators shall conduct an internal inspection of any Tank that was lined prior to January 11, 2008 in accordance with NLPA Standard 631, Chapter A, *Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks* and Chapter B, *Future Internal Inspection Requirements for Lined Tanks,* and API RP 1631, *Interior Lining and Periodic Inspection of Underground Storage Tanks.* At the time of the inspection, the lined Tank shall be structurally sound and comply with the original design specifications. If any damage is found, Repairs shall be made in accordance with standard engineering practice, industry standards and the requirements of these Regulations or the Tank shall be replaced in accordance with the requirements in Part D, Section 1.0.

1.30.3.4 When an internally lined bare steel Tank is not inspected at a minimum in accordance with the intervals required in Part D, subsection 1.30.3.3 and subsequently fails an internal inspection test the Tank shall be Removed or Closed In Place.

11 DE Reg. 922 (01/01/08)
13 DE Reg. 1562 (06/01/10)
23 DE Reg. 581 (01/01/20)

2.0 Change In Service Requirements for UST Systems Storing Hazardous Substance

2.1 Owners and Operators shall notify the Department of all Changes In Service in accordance with the requirements of Part A, Section 4.0 of these Regulations.

2.2 General Requirements for Change In Service from In Service to Out Of Service for UST Systems Storing Hazardous Substance

2.2.1 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part D, Section 1.0 when a Hazardous Substance UST System is Out of Service.

2.2.2 Owners and Operators shall continue operation and Maintenance of Release Detection in accordance with the applicable Release Detection requirements for Tanks and Piping in Part D, Section 1.0, when a Hazardous Substance UST System is Out Of Service.

2.2.3 Owners and Operators shall continue to perform routine UST System testing in accordance with Part D, Section 1.0.

2.2.3.1 Leave vent Pipes open and functioning; and

2.2.3.2 Cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

2.2.4 Owners and Operators shall comply with the routine inspection requirements of Part D, subsection 1.29, when a Hazardous Substance UST System is Out of Service.

2.3 General Requirements for Change In Service from Out Of Service to In Service for UST Systems Storing Hazardous Substance

2.3.1 Prior to a Change in Service of a Hazardous Substance UST System from Out Of Service to In Service, Owners and Operators shall ensure that the UST System meets the following requirements prior to being placed In Service:

2.3.1.1 The Hazardous Substance UST system shall meet the requirements of Part D, Section 1.0; and

2.3.1.2 The Hazardous Substance UST System shall be tested for tightness as applicable; and

2.3.1.3 All Cathodically Protected Hazardous Substance UST Systems shall be tested and all necessary Repairs made in accordance with the requirements of Part D, subsection 1.24.

2.4 Change In Service Site Assessment Requirements for UST Systems Storing Hazardous Substance

2.4.1 When a Hazardous Substance UST System is Out Of Service for twelve (12) months, Owners and Operators shall complete a Site Assessment designed to measure for the presence of a Release where contamination is most likely to be present. The Site Assessment is not restricted to the property containing the UST System. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

2.4.2 Owners and Operators shall submit the following documents to the Department within thirty (30) Days of the completion of the Site Assessment required in Part D, subsection 2.4.1:

2.4.2.1 A site plan detailing the UST(s) location and surrounding area; and

2.4.2.2 The approved Site Assessment plan with sampling points clearly marked; and

2.4.2.3 Chain of custody for all samples submitted for laboratory analysis; and

2.4.2.4 Results of any on-site screening performed; and

2.4.2.5 Laboratory test results for all samples submitted for laboratory analysis; and

2.4.2.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change In Service of the UST System, including manifests and receipts for soil, water, and Hazardous Substances.

2.4.2.7 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part D, subsection 2.4.1, or by any other manner, Owners and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

2.5 Financial Responsibility Requirements for Out Of Service Hazardous Substance USTs

2.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations for Out Of Service Hazardous Substance UST Systems.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

3.0 Removal or Closure in Place Requirements for UST Systems Storing Hazardous Substance

3.1 Owners and Operators shall notify the Department of all Removals or Closures in Place in accordance with the requirements of Part A, Section 4.0 of these Regulations.

3.2 Removal or Closure in Place General Requirements for UST Systems Storing Hazardous Substance

3.2.1 The Removal and Closure in Place procedures shall comply with the following industry standards:

3.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks*.

3.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

3.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*.

3.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

3.3 Removal or Closure in Place Site Assessment Requirements for UST Systems Storing Hazardous Substance

3.3.1 At the time of Removal of a Hazardous Substance UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be

present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. The Site Assessment shall be completed within fourteen (14) Days of the Removal of the Hazardous Substance UST System.

3.3.2 At the time of Closure in Place of a Hazardous Substance UST System, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation. The Site Assessment shall be completed within fourteen (14) Days of the Closure In Place of the Hazardous Substance UST System.

3.3.3 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part D, subsections 3.3.1 and 3.3.2, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

3.4 Removal or Closure in Place Recordkeeping Requirements for UST Systems Storing Hazardous Substance

3.4.1 Owners and Operators shall submit the following documents to the Department within sixty (60) Days of the Removal or Closure in Place of a Hazardous Substance UST System:

3.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

3.4.1.2 A site map with sampling points clearly marked; and

3.4.1.3 Results of any on-site screening performed; and

3.4.1.4 Chain of custody for all samples submitted for laboratory analysis; and

3.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

3.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Removal of the UST System, including manifests and receipts for soil, water, and Hazardous Substances and the UST System disposal; and

3.4.1.7 Documentation of Tank cleaning prior to UST System Closure in Place.

3.5 Removal or Closure in Place Financial Responsibility Requirements for UST Systems Storing Hazardous Substance

3.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations until the UST System is permanently Removed or Closed In Place in accordance with the requirements of Part D.

3.6 Applicability to Previously Removed or Closed In Place UST Systems Storing Hazardous Substance

3.6.1 When a Release is suspected from a previously Removed, Closed In Place or abandoned UST System, the Owner, Operator and Responsible Party shall comply with the requirements of Part E of these Regulations. If a Release is confirmed the Owner, Operator and Responsible Party shall Remove or Close In Place the UST System in accordance with all applicable requirements of these Regulations.

13 DE Reg. 1562 (06/01/10)
23 DE Reg. 581 (01/01/20)

4.0 Change In Substance Stored Requirements for UST Systems Storing Hazardous Substance

4.1 Owners and Operators shall notify the Department of any Change in Substance Stored in accordance with the requirements of Part A, Section 4.0 of these Regulations.

4.2 Change In Substance Stored General Requirements for UST Systems Storing Hazardous Substance

4.2.1 Before the Change In Substance Stored, Owners and Operators shall Empty and clean the UST System by removing all liquids and accumulated sludge in accordance with the following industry standards:

4.2.1.1 API RP 1604, *Closure of Underground Petroleum Storage Tanks.*

4.2.1.2 API Standard 2015, *Safe Entry and Cleaning of Petroleum Storage Tanks*.

4.2.1.3 OSHA, 29 CFR, 1910.146, *Permit Required Confined Spaces*.

4.2.1.4 PEI RP 1700, *Recommended Practices for the Closure of Underground Storage Tank and Shop-Fabricated Aboveground Storage Tank Systems*.

4.3 Change In Substance Stored Site Assessment Requirements for UST Systems Storing Hazardous Substance

4.3.1 Within thirty (30) Days of the completion of the cleaning of the UST System required in Part D, subsection 4.2, Owners and Operators shall perform a Site Assessment to measure for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, Owners and Operators shall consider the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment plan shall be approved by the Department prior to implementation.

4.3.2 If contaminated soils, contaminated groundwater, or LNAPL as a liquid or a vapor is discovered as a result of the Site Assessment performed in accordance with Part D, subsection 4.3.1, or by any other manner, Owner and Operators shall initiate a hydrogeologic investigation and Remedial Action in accordance with the requirements of Part E of these Regulations.

4.4 Change In Substance Stored Recordkeeping Requirements for UST Systems Storing Hazardous Substance

4.4.1 The Owner and Operator shall submit the following documents to the Department within thirty (30) Days of the Change In Substance Stored in an UST System:

4.4.1.1 A site plan detailing the UST(s) location and surrounding area; and

4.4.1.2 The approved Site Assessment plan with sampling points clearly marked; and

4.4.1.3 Chain of custody for all samples submitted for laboratory analysis; and

4.4.1.4 Results of any on-site screening performed; and

4.4.1.5 Laboratory test results for all samples submitted for laboratory analysis; and

4.4.1.6 Documentation of proper disposal or recycling of solid or hazardous waste generated as a result of the Change In Substance Stored of the UST System, including manifests and receipts for soil, water, and Hazardous Substances.

4.5 Change In Substance Stored Financial Responsibility Requirements for UST Systems Storing Hazardous Substance

4.5.1 Owners and Operators shall comply with the requirements of Part F of these Regulations until the UST System is permanently Removed or Closed In Place in accordance with Part D, Section 3.0 or is rendered Empty in accordance with Part D, Section 5.0.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

5.0 Requirements for Empty UST Systems Storing Hazardous Substance

5.1 When any UST System is Empty:

5.1.1 Owners and Operators shall leave vent Pipes open and functioning, and cap and secure all other Pipes, pumps, manways, and Ancillary Equipment.

5.1.2 Owners and Operators shall continue operation and Maintenance of corrosion protection in accordance with the applicable requirements of Part D, Section 1.0 until the UST System is Removed or Closed In Place in accordance with Part D, Section 3.0.

5.1.3 Release Detection and Routine Inspection are not required.

5.2 Within three (3) months of rendering any UST System Empty, Owners and Operators shall complete a Site Assessment in accordance with Part D, subsection 2.4 or perform a Removal or a Closure In Place of the UST System in accordance with Part D, Section 3.0.

23 DE Reg. 581 (01/01/20)

PART E: Requirements for Reporting, Release Investigation, Remedial Action and No Further Action Determinations For Underground Storage Tank Systems

1.0 Reporting Requirements

1.1 Reporting Requirements for Releases Indicated by Unusual Operating Conditions

1.1.1 Owners and Operators shall report any unusual operating conditions to the Department by calling 302-395-2500 within twenty-four (24) hours of discovery or by the next Day.

1.1.2 Unusual Operating Conditions Include:

1.1.2.1 The sudden loss of product from any portion of the UST System;

1.1.2.2 Inventory control discrepancies;

1.1.2.3 A signal or alarm from any Release Detection device or method that indicates a Release may have occurred;

1.1.2.4 Failed or inconclusive Statistical Inventory Reconciliation (SIR) results;

1.1.2.5 Irregular behavior of product dispensing equipment;

1.1.2.6 Equipment failure or malfunction;

1.1.2.7 The unexplained presence of water in the UST System;

1.1.2.8 Evidence of a Release of a Regulated Substance noted during a routine inspection;

1.1.2.9 Evidence of liquid in the interstitial space of Secondarily Contained systems.

1.1.2.10 Failure of a Tank, Piping or vapor recovery test.

1.2 Reporting Requirements for Releases Indicated by Environmental Conditions

1.2.1 Any indication of a Release of a Regulated Substance that is discovered by any Person, including environmental consultants, environmental contractors, utility companies, financial institutions, real estate transfer companies, UST Owners or Operators, or Responsible Parties shall be reported within twenty-four (24) hours to:

1.2.1.1 The Department by calling 302-395-2500 during normal business hours; and

1.2.1.2 The Department's 24-hour Release Hot Line by calling 800-662-8802, when required in accordance with 7 **Del.C.** Ch. 60 and the Regulations promulgated thereunder as amended.

1.2.1.3 If the phone numbers listed in these Regulations are not valid it is the responsibility of the Person discovering the Release to take all reasonable steps to ascertain a valid phone number.

1.2.1.4 The Department may require that the UST System be taken Out Of Service or rendered Empty until the cause of the indication of the Release is determined, if the Department deems such action necessary to protect human health, safety or the environment.

1.2.2 Releases Indicated by Environmental Conditions include:

1.2.2.1 Stained soils or soils that emit characteristic odors of Regulated Substance compounds which are exposed during digging, boring or excavation activities, Repair, Retrofit or Upgrade of UST Systems, Removal of an UST System or collection of soil samples around an UST System that is Closed In Place, or results from a Phase I or Phase II environmental Site Assessment; or

1.2.2.2 Water from supply wells, public or private, that exhibit a decrease in water quality, which is shown by subsequent analysis to result from the presence of a Regulated Substance; or

1.2.2.3 The appearance of characteristic odors of a Regulated Substance in basements or other enclosed spaces; or

1.2.2.4 The appearance of a sheen on a surface water body; or

1.2.2.5 The appearance of a sheen or measurable LNAPL in a supply well, Monitoring Well, or Observation Tube; or

1.2.2.6 A laboratory report that indicates a sample collected from an UST excavation, soil boring, Monitor Well or Observation Tube contains a Regulated Substance; or

1.2.2.7 Notification from the State Emergency Prevention and Response Section or another State or Federal agency of the discovery of uncontained Regulated Substance compounds.

1.3 Reporting Requirements for Confirmed Releases Excluding Spills and Overfills of a Regulated Substance

1.3.1 Owners and Operators shall not knowingly allow any Release from an UST System to continue.

1.3.2 Any Person, including environmental consultants or contractors, utility companies, financial institutions or real estate transfer companies, that discovers any Release of Regulated Substance, shall report the discovery to:

1.3.2.1 The Department's 24-hour Release Hot Line immediately by calling 800-662-8802, in accordance with 7 **Del.C.** Ch. 60 and the Regulations promulgated thereunder as amended.

1.3.2.2 The Department by calling 302-395-2500, within twenty-four (24) hours, during normal business hours.

1.3.3 Any Person who discovers a Release of any quantity of a petroleum substance that produces a visible sheen on surface waters shall immediately notify the National Response Center (800)-424-8802.

1.3.4 Responsible Parties shall immediately contain the Release and shall complete the Release response, investigation and Remedial Action requirements of Part E as required.

1.3.5 Owners and Operators shall comply with the release notification requirements of any other state, federal, or municipal agency.

1.4 Reporting Requirements for Spills and Overfills of Regulated Substance

1.4.1 Owners and Operators shall report any spill or overfill that results in a Release to the environment that exceeds twenty-five (25) gallons to the Department immediately by calling 800-662-8802, and shall contact the Department, 302-395-2500, for further instructions. Owners and Operators shall immediately contain and clean up the spill or overfill and shall comply with the Release investigation, hydrogeologic investigation and Remedial Action requirements of Part E as directed by the Department.

1.4.2 Owners and Operators shall immediately contain and clean up any spill or overfill that results in a release to the environment that is less than twenty-five (25) gallons. If cleanup cannot be accomplished within twenty-four (24) hours, Owners and Operators shall immediately notify the Department (302-395-2500). Owners and Operators shall comply with the Release investigation, hydrogeologic investigation and Remedial Action requirements of Part E as directed by the Department.

1.5 Reporting Requirements for Spills and Overfills of Hazardous Substance

1.5.1 Owners and Operators shall report any spill or overfill of a Hazardous Substance that results in a Release that equals or exceeds the reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (40 CFR Part 302) or 7 **Del.C.** §6028 to the Department immediately by calling 800-662-8802 and shall contact the Department (302-395-2500) for further instructions. Owners and Operators shall immediately contain and clean up the spill or overfill and shall comply with the Release investigation, hydrogeologic investigation and Remedial Action requirements of Part E as directed by the Department.

1.5.2 Owners and Operators shall report a Release of a Hazardous Substance equal to or in excess of its reportable quantity *immediately* to the National Response Center under 42 U.S.C., Chapter 103, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

1.5.3 Owners and Operators of UST systems shall immediately contain and clean up any spill or overfill of a Hazardous Substance in a quantity less than a reportable quantity under CERCLA (40 CFR Part 302) or 7 **Del.C.** §6028. If cleanup cannot be accomplished within twenty-four (24) hours, Owners and Operators shall immediately notify the Department (302-395-2500). Owners and Operators shall comply with the Release investigation, hydrogeologic investigation and Remedial Action requirements of Part E as directed by the Department.

1.6 Public Notice Requirements for Confirmed Releases

1.6.1 For each confirmed Release that requires a Remedial Action plan, the Department shall provide notice to the public by means designed to reach those members of the public directly affected by the Release and the planned Remedial Action. This notice may include public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, personal contacts by field staff or posting relevant information on the internet.

1.6.2 The Department shall ensure that relevant site release information relating to Remedial Action Plans is available to the public upon request.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

2.0 Indicated Release Investigation Requirements

2.1 General Requirements for Indicated Release Investigation

2.1.1 Unless Remedial Action is immediately initiated in accordance with the requirements of Part E, Responsible Parties shall investigate and confirm, within seven (7) Days, any indication of a Release of a Regulated Substance including those listed in Part E, subsection 1.1.

2.2 Investigation Procedures for Releases Indicated by Unusual Operating Conditions

2.2.1 Upon discovery of an indication of a Release Responsible Parties shall:

2.2.1.1 Within twenty-four (24) hours initiate an investigation to determine the cause of any unusual operating condition.

2.2.1.1.1 If the unusual operating condition is the result of an equipment failure or malfunction, Owners and Operators shall Repair or replace all faulty equipment in accordance with all applicable portions of these Regulations.

2.3 Investigation Procedures for Releases Indicated by Inventory Control Discrepancies

2.3.1 Owners and Operators shall initiate an investigation procedure within twenty-four (24) hours of identification of an inventory discrepancy as described in Part B, Part C or Part D of these Regulations. The investigation shall proceed until the cause of the discrepancy has been found. The investigation shall include:

2.3.1.1 Inventory records shall be checked for mathematical errors; and

2.3.1.2 Inventory records shall be checked for error in measurement, substance temperature change, or other variables; and

2.3.1.3 If the significant loss or gain is not reconcilable after the steps in Part E, subsections 2.3.1.1 or 2.3.1.2 are completed, or cannot be affirmatively demonstrated to be the result of pilferage, the UST System shall be checked for damage; and

2.3.1.4 Release Detection systems shall be checked for signs of a Release; and

2.3.1.5 Correct calibration of the inventory measuring system and any Dispensers shall be verified.

2.3.2 If the source of the inventory discrepancy has not been determined from the above procedures, Owners and Operators shall notify the Department within twenty-four (24) hours of completion of the investigation procedures in Part E, subsections 2.3.1.1, 2.3.1.2, 2.3.1.3, 2.3.1.4, and 2.3.1.5, and Owners and Operators shall initiate the Release investigation and confirmation steps established in Part E.

2.4 Investigation Procedures for Releases Indicated by Environmental Conditions

2.4.1 Within twenty-four (24) hours develop a plan and initiate an investigation within seven (7) Days to determine the presence or absence of a Release by:

2.4.1.1 Conducting an UST System tightness test in accordance with Part B, subsections 1.13 and 2.13, Part C, subsections 1.13 and 2.13 or Part D, subsection 1.13 as applicable; or

2.4.1.2 Measuring for the presence of a Release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, the type of initial indication of contamination, type of backfill and soil, the depth of groundwater, and other factors appropriate for identifying the presence and source of the Release shall be considered; or

2.4.1.3 Additional UST system testing or site assessment activities as directed by the Department.

2.4.2 If the Release investigation determines that a Release has occurred, Responsible Parties shall comply with the hydrogeologic investigation and Remedial Action requirements of Part E.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

3.0 Release Response Requirements

3.1 Department Authority to Assume Control of Releases

3.1.1 The Department reserves the right to assume control of any Release or indicated Release situation when it is determined that the Responsible Parties are not responding promptly or effectively. In such cases all liability, including payment to the Department of response costs, will remain with the Responsible Parties.

3.1.2 To protect human health, safety and the environment the Department reserves the right for the Department or its contractors to enter and take appropriate actions on affected properties to investigate, abate and remediate contamination.

3.2 Initial Release Response Requirements

3.2.1 In response to a Release from an UST System, the Responsible Parties shall promptly take the following steps:

3.2.1.1 The cause of the Release shall be promptly identified through UST System tightness testing or other means approved by the Department; and

3.2.1.2 If a faulty UST System component is determined to be the cause of a Release, the component or, if necessary, the entire UST System, shall be taken Out Of Service or rendered Empty and shall not be returned to service until the UST System is functioning in compliance with all applicable portions of these Regulations; and

3.2.1.3 The Regulated Substance contained within the UST System shall be removed unless otherwise directed by the Department; and

3.2.1.4 No Responsible Parties shall put back into service any UST System that has caused a Release without prior approval from the Department; and

3.2.1.5 An investigation shall be conducted to determine an estimate of the amount and type of Regulated Substance Released; and

3.2.1.6 Responsible Parties shall implement the following to contain the Release:

3.2.1.6.1 If LNAPL is present, LNAPL Corrective Action shall be immediately initiated in accordance with Part E, subsection 3.3; and

3.2.1.6.2 Nearby receptors shall be protected from impacts of Regulated Substances through recovery and containment measures to prevent migration of Mobile and Migrating LNAPL. The Department shall be notified of all activities; and

3.2.1.6.3 All flammable material shall be properly handled and vapors shall be mitigated to prevent fires, explosions and impacts to receptors.

3.3 LNAPL Corrective Action Requirements

3.3.1 At sites where there is a Release of LNAPL, the Responsible Parties shall remove and remediate the LNAPL to the maximum extent practicable following the requirements established in Part E of these Regulations while continuing, as necessary, the Release confirmation steps and the investigation required in Part E of these Regulations.

3.3.2 The Responsible Parties shall formulate a LNAPL Conceptual Site Model (LCSM) to determine the most efficient and environmentally protective remedial approach for addressing the Release.

3.3.3 The Responsible Parties shall verbally communicate a preliminary LCSM to the Department within forty-eight (48) hours of the discovery of a Release of LNAPL. The preliminary LCSM shall address as many of the criteria listed in Part E, subsection 3.3.4 as possible.

3.3.4 The LCSM shall at a minimum address the following factors with regard to the LNAPL Release:

3.3.4.1 The feasibility and necessity of an immediate response; and

3.3.4.2 Direct and potential impacts to human health, safety and the environment; and

3.3.4.3 The type and estimated volume of the LNAPL released; and

3.3.4.4 The evidence, or occurrence, of the LNAPL Release (Migrating LNAPL, Mobile LNAPL in a well, Residual LNAPL discovered during an investigation); and

3.3.4.5 The potential recoverability of all LNAPL phases; and

3.3.4.6 The geometry of the LNAPL Body; and

3.3.4.7 The estimated age and duration of the LNAPL Release; and

3.3.4.8 The characteristics of the subsurface soils; and

3.3.4.9 The chemical and physical properties of the LNAPL; and

3.3.4.10 Groundwater classification for the area such as wellhead protection areas, excellent recharge areas, or source water protection areas.

3.3.5 Responsible Parties shall base all short and long term Remedial Action decisions upon the information in the LCSM, which shall be updated, in writing and submitted to the Department, at a minimum of once every three (3) calendar months, or on a schedule approved by the Department.

3.3.6 LNAPL removal shall be conducted in a manner that minimizes the spread of contamination, including dissolved and vapor phases, into previously uncontaminated areas by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery by-products in accordance with all applicable local, state and federal requirements.

3.3.7 If LNAPL recovery is not practicable, and does not support site Remedial Action objectives as determined by the Department, the Responsible Parties may submit a written request for Department approval to discontinue LNAPL recovery. The request shall at a minimum include the following:

3.3.7.1 Technical feasibility of other proven groundwater and soil treatment techniques to further reduce LNAPL at the site; and

3.3.7.2 Costs, time frames, and resources involved to further reduce LNAPL levels employing the current and alternative method(s) proposed; and

3.3.7.3 A demonstration that the remaining LNAPL Body is not contributing to any unstable daughter plumes such as a dissolved plume and vapor migration; and

3.3.7.4 A demonstration that remaining LNAPL does not pose any risk to human health, safety, and the environment; and

3.3.7.5 An assessment of the persistence and fate of the LNAPL in the subsurface; and

3.3.7.6 A description of the individual site characteristics, including natural rehabilitative processes; and

3.3.7.7 Statements regarding current versus future land use of the site.

3.3.8 The Department may require the Responsible Parties to follow any applicable guidance or industry referenced standards in order to create a sound LCSM, from which optimal Remedial Action decisions can be made.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

4.0 Hydrogeologic Investigation Requirements

4.1 General Requirement for Hydrogeologic Investigation

4.1.1 After a Release is confirmed and controlled, and LNAPL Corrective Action has commenced, Responsible Parties shall conduct a hydrogeologic investigation to determine the nature and extent of the Release and to make an initial estimate of any potential risks to human health, safety and to the environment, which are associated with the Release.

4.1.2 Responsible Parties shall conduct a hydrogeologic investigation to determine if an UST System is the source of environmental impacts to properties near an UST Facility. These impacts include the discovery of Regulated Substances such as the presence of LNAPL, dissolved phase contamination or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters that have been observed by the Department or brought to its attention by another party.

4.2 Hydrogeologic Investigation Requirements

4.2.1 After a Release is confirmed, Responsible Parties shall conduct a hydrogeologic investigation as the first step in the Corrective Action process unless directed to do otherwise by the Department. The investigation shall at a minimum include the following:

4.2.1.1 Determine the nature of the Release, including the chemical compounds present, their concentrations, quantity released, and their physical and chemical characteristics related to potential human health and environmental impacts and cleanup procedures; and

4.2.1.2 Determine the extent of the Release, both horizontal and vertical, including whether the contaminant is distributed homogeneously or heterogeneously; and

4.2.1.3 Determine the physical characteristics of the site, including characteristics affecting the Occurrence, distribution, and movement of the released contaminant and characteristics affecting access to the site, both horizontal and vertical, which may influence the feasibility of various investigatory and remediation procedures; and

4.2.1.4 Evaluate, in accordance with the Delaware Risk-Based Corrective Action Program (DERBCAP) or other Department approved procedures, the potential risks posed by the Release including identification of environmentally sensitive receptors, and an estimate of the impacts to human health and the environment that may occur as a result of the Release.

4.2.2 Responsible Parties shall submit the results of the hydrogeologic investigation to the Department no later than one hundred twenty (120) Days after a Release is confirmed or other Department approved schedule. The hydrogeologic investigation report shall include recommendations for further action or a request for a no further action determination in accordance with Part E, subsection 6.1.

4.2.3 The results of the hydrogeologic investigation shall be organized in report form in accordance with Department guidance and signed by a professional geologist or professional engineer registered in the State of Delaware as required in 24 **Del.C.** Ch. 36 and the Delaware Board of Registration of Geologists Regulations and 24 **Del.C.** Ch. 28.

4.2.4 The Department shall review the report and either accept the conclusions and recommendations of the report or require that within ninety (90) Days or other Department approved schedule, the Responsible Parties shall submit additional information or a Remedial Action work plan (RAWP) to the Department.

4.2.5 The Responsible Parties may submit hydrogeologic investigation reports for a site separately or as part of a proposed long term Remedial Action work plan in accordance with the requirements of Part E, Section 5.0.

4.3 Quality Assurance and Quality Control Requirements

4.3.1 Responsible Parties shall develop and implement a site specific Quality Assurance/Quality Control (QA/QC) plan for the activities to be carried out during the hydrogeologic investigation and the QA/QC plan shall be included in the hydrogeologic investigation report submitted to the Department.

4.4 Site Safety Requirements

4.4.1 Responsible Parties shall develop a site specific health and safety plan which shall be furnished to the Department upon request and shall cover all hydrogeologic investigation tasks. The health and safety plan shall address the site worker protection levels, protection of Persons living near the site, and site access control during the investigation.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

5.0 Remedial Action Requirements

5.1 Administrative Option For Remedial Action

5.1.1 The Department may waive the requirement of a hydrogeologic investigation when the Responsible Parties have taken the appropriate initial response steps to eliminate imminent dangers and to prevent any further Release and have chosen to submit a Remedial Action work plan (RAWP) for remediating contaminated soil, groundwater and surface water.

5.1.2 If the Department determines that the implementation of Remedial Actions are not achieving adequate protection of human health, safety or the environment, the Department shall require Responsible Parties to take appropriate action.

5.1.3 Responsible Parties may, in the interest of minimizing environmental contamination and promoting more effective remediation, initiate remediation of soil and groundwater before the Remedial Action work plan is approved provided that the Responsible Parties:

5.1.3.1 Notify the Department of their intention to initiate remediation; and

5.1.3.2 Comply with any conditions imposed by the Department, including halting remediation or mitigating adverse consequences from remedial activities; and

5.1.3.3 Incorporate these self initiated remediation measures in the RAWP that shall be submitted to the Department for approval; and

5.1.3.4 Recognize that any actions taken by the Responsible Parties without prior Department approval is at the risk of the Responsible Parties and does not absolve the Responsible Parties of the obligation to comply with the Remedial Action requirements of Part E.

5.2 Remedial Action Work Plan (RAWP) Requirements

5.2.1 At any point after reviewing the information contained in the hydrogeologic investigation report, the Department may require the Responsible Parties to submit additional information or to develop and submit a RAWP for responding to contaminated soils, surface water and groundwater.

5.2.2 The RAWP shall address the contamination of soils, groundwater and surface water, including all Occurrences of LNAPL resulting from a Release, and shall be submitted to the Department in a timeframe specified by the Department. The RAWP shall provide for adequate protection of human health, safety and the environment, and shall establish cleanup goals for the site.

5.2.3 Responsible Parties shall modify any RAWP that does not provide for adequate protection of human health, welfare, safety and the environment, as necessary to meet the requirements of Part E of these Regulations.

5.2.4 The RAWP shall include sufficient design information that demonstrates that the remedial technology shall meet the cleanup goals approved by the Department and shall include an estimated time to cleanup completion for the remediation method proposed in the RAWP.

5.2.5 A RAWP shall propose a Remedial Action method for the site that shall:

5.2.5.1 Reduce the contaminant levels at the site to meet the cleanup goals proposed in the Remedial Action work plan and approved by the Department; or

5.2.5.2 Reduce the contaminant levels to achieve the cleanup goals established by the Department; or

5.2.5.3 Monitor the site over time to provide technically-based assurance that the site contamination is controlled under natural conditions and that those conditions will not now, or at some future time, adversely impact human health, safety or the environment.

5.2.6 The Department shall approve the RAWP when satisfied that implementation of the RAWP provides for measures considered adequate to protect human health, safety, and the environment.

5.2.7 The RAWP shall be organized in report form and signed by a professional geologist or professional engineer registered in the State of Delaware as required in 24 **Del.C.** Ch. 36 and the *Delaware Board of Registration of Geologists Regulations* and 24 **Del.C.** Ch. 28.

5.2.8 The RAWP shall be of site specific design and shall be based on the results of the hydrogeologic investigation, or contain appropriate investigatory steps if submitted without a prior hydrogeologic investigation having been completed.

5.2.9 The RAWP may propose a phased approach to site remediation. If data can justify a no further action determination, Responsible Parties may request a no further action determination in accordance with the requirements of Part E, Section 6.0. Remedial Action will be considered complete only upon the Department's evaluation and approval of a satisfactory no further action request.

5.2.10 The RAWP shall include a summary of past efforts and a description of any new or continued efforts to effectively remove LNAPL as described in Part E, Section 3.0.

5.2.11 The RAWP may include green sustainable remediation practices, processes, and technologies in accordance with ASTM (ASTM International) *E2893-16 Standard Guide for Greener Cleanup*. ITRC (Interstate Technology & Regulatory council). *Green and Sustainable Remediation: State of the Science and Practice. GSR-1* and ITRC (Interstate Technology & Regulatory Council). *Green and Sustainable Remediation: A Practical Framework. GSR-2*.

5.2.12 The RAWP may include the use of Institutional Controls to reduce the potential for exposure to Hazardous Substances. Institutional Controls may include land use restrictions, activity restrictions, groundwater use restrictions, operations and Maintenance requirements, or other Institutional Controls.

5.3 Quality Assurance and Quality Control Requirements

5.3.1 Responsible Parties shall develop and implement a site specific Quality Assurance/Quality Control (QA/QC) plan for the activities to be carried out during implementation of the RAWP and the QA/QC plan shall be included in the RAWP submitted to the Department.

5.4 Site Safety Requirements

5.4.1 Responsible Parties shall develop a site-specific health and safety plan which shall be furnished to the Department upon request and shall cover all Remedial Action tasks. The health and safety plan shall, at a minimum, address site worker protection levels, protection of Persons living near the site, and site access control during the remediation.

5.5 Implementation and Reporting Schedule

5.5.1 Upon approval of the RAWP by the Department, the Responsible Parties shall implement the RAWP, including any modifications to the RAWP made by the Department, within the timeframe approved by the Department.

5.5.2 The Responsible Parties shall monitor, evaluate and report to the Department the results of implementing the Remedial Action at a minimum of once every three (3) calendar months, or within the time schedule approved in the RAWP. Copies of all records documenting the transport and disposal of any free product, contaminated water and soil, or other waste that is generated at the site while investigation and Remedial Action work is being performed shall be included in each report.

5.5.3 The Responsible Parties shall submit a Remedial Action progress report to the Department once every twelve (12) calendar months that includes an evaluation of the effectiveness of the Remedial Action to determine whether additional measures shall be implemented to meet the cleanup goals established in the RAWP. The evaluation shall include an estimate of time to Remedial Action completion.

5.5.4 Responsible Parties shall submit recommendations for optimization and improvement as needed to achieve the cleanup goals established in the RAWP, as part of each Remedial Action progress report.

5.6 Post Remedial Monitoring

5.6.1 Upon completion of Remedial Action activities the Responsible Parties shall perform four (4) consecutive quarters of groundwater sampling or other sampling schedule as approved by the Department to ensure the contaminant plume is stable and shrinking and that rebounding does not occur.

13 DE Reg. 1562 (06/01/10)
23 DE Reg. 581 (01/01/20)

6.0 No Further Action Requirements

6.1 Request for No Further Action Determination

6.1.1 After all Corrective Actions are complete and cleanup goals have been achieved, the Responsible Parties shall submit a written request to the Department for no further action (NFA). The request for no further action shall include but is not limited to the following documentation:

6.1.1.1 A demonstration that the site does not threaten human health, safety and the environment based on current land use of the site and surrounding area; and

6.1.1.2 LNAPL does not exist or has been addressed in accordance with Part E, subsection 3.3; and

6.1.1.3 Contaminant levels have been reduced to levels at or below the cleanup goals approved by the Department; and

6.1.1.4 Institutional Controls as required by the Department, including the replacement of an Environmental Covenant (EC) on a Facility, as provided for in 7 **Del.C.** §§7907-7920, the Uniform Environmental Covenants Act (UECA) have been established.

6.1.2 The Responsible Parties shall submit all documents, permits, certificates, approvals, etc. relating to the transportation of impacted environmental media and materials from the site including USTs, soils, Regulated Substances, and water that has not been previously submitted to the Department. Documentation shall include tipping fees, waste receipts, bills of lading or any other documentation verifying that all waste has been properly disposed.

6.1.3 The request for no further action shall be signed by a professional geologist or professional engineer registered in the State of Delaware as required in 24 **Del.C.** Ch. 36 and the *Delaware Board of Registration of Geologists Regulations* and 24 **Del.C.** Ch. 28, when requested by the Department.

6.2 Department Response to a Request for No Further Action

6.2.1 The Department shall issue a letter requiring no further action (NFA letter) and documenting that site cleanup objectives have been met. The issuance of the NFA letter does not absolve the Responsible Parties from previously incurred or potential future liability.

6.2.2 The NFA letter applies to site conditions at the time that the request for no further action was made. Except as discussed in subsection 6.2.3, once the Department has issued a NFA letter associated with a Release, the Department shall not require Responsible Parties to perform additional Corrective Actions associated with the Release unless site conditions, including the current or future land use, change or there is new information that the Release poses an unacceptable risk to human health, safety, or the environment.

6.2.3 The Department shall not require Responsible Parties to perform additional Corrective Actions associated with an UST System when all of the following conditions have been met: (1) the Department has issued any type of NFA letter, either with conditions for future management or without conditions for future management after the Removal or Closure In Place of the UST System, (2) the UST System was located on a residential property, (3) the Tank associated with the UST System contained Consumptive Use Heating Fuel used for Consumptive Use On the Premises.

6.2.4 As per Delaware Code Title 26, Chapter 8, Subchapter 1: Underground Utility Damage Prevention and Safety, any Person disturbing any residual contamination at the site by digging, boring, excavating, dewatering, or other means, shall contact Miss Utility prior to activities to arrange for markout of all subsurface utilities, shall submit a contaminated material management plan to the Department for approval prior to work commencing, and shall be financially responsible for implementing it.

13 DE Reg. 1562 (06/01/10)
19 DE Reg. 773 (02/01/16)
23 DE Reg. 581 (01/01/20)

7.0 All Appropriate Inquiry

7.1 All Appropriate Inquiry Requirements

7.1.1 When residential property is purchased by an individual, individuals, or a nonprofit agency as defined by the Internal Revenue Service or State law, a title search, a visual inspection by the purchaser or his or her agent that is intended to locate evidence of a UST System on the property, and other supporting

documentation including a real estate disclosure form, No Further Action letter or Department provided Discovery Questionnaire shall constitute all appropriate inquiry pursuant to 7 **Del.C.** §7406e(2)(b).

19 DE Reg. 773 (02/01/16)

23 DE Reg. 581 (01/01/20)

Part F: Financial Responsibility Requirements for Underground Storage Tank Systems

1.0 Financial Responsibility Requirements for UST Systems

1.1 Applicability

1.1.1 The Requirements of Part F of these Regulations apply only to Owners or Operators of UST Systems subject to the requirements of Part B and Part D of these Regulations.

1.1.2 UST System Owners or Operators are subject to the requirements of Part F if the UST Systems are in operation on or after the date for compliance established in Part F, subsection 1.2.

1.1.3 The State and Federal government entities whose debts and liabilities are the debts and liabilities of the State or the United States are exempt from the financially responsibility requirements of Part F for UST Systems owned by a State or Federal government entity.

1.1.4 The requirements of Part F do not apply to Owners or Operators of any UST System described in Part A, subsection 1.2.

1.1.5 If the Owner or Operator of an UST System 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 is established in Part F, subsection 1.2.

1.1.6 Owners or Operators shall maintain a copy of all documentation as referenced in subsections 2.2 through 2.12. and Section 3.0, Forms A-R of Part F.

1.1.7 Owners or Operators shall maintain evidence of all current and historical financial assurance mechanisms as required in subsections 2.2 through 2.12 and Section 3.0, Forms A-R of Part F, used to demonstrate financial responsibility under Part F until released from the requirements under Part F, subsection 2.16.

1.1.8 Records documenting compliance with the financial responsibility requirements of Part F shall be submitted prior to placing any regulated substance into an UST System and upon policy renewal. Records shall also be made available upon the request of the Department. If an Insurance and Risk Retention Group Coverage mechanism is used to comply with the financial responsibility requirements, such certification requires submission of Insurance and Risk Retention Group Coverage documents, including a copy of the complete insurance policy and any endorsements and Part F, subsection 3.4 (Form D) and Part F, subsection 3.18 (Form R).

1.1.9 The required per-Occurrence and Annual Aggregate coverage amounts do not in any way limit the liability of Owners or Operators.

1.1.10 Owners or Operators shall review the amount of financial responsibility required whenever additional UST Systems are installed to ensure compliance with the requirements of Part F.

1.1.11 Owners or Operators shall submit to the Department documentation of the current financial responsibility mechanism within ten (10) Days of receipt of a Department issued hydrogeologic investigation letter.

1.1.12 No UST Systems shall contain a Regulated Substance without a current and valid financial responsibility mechanism in accordance with the applicable requirements of these Regulations.

1.2 Compliance Dates

1.2.1 Owners or Operators of UST Systems storing Regulated Substance shall comply with the financial responsibility requirements of Part F by the following dates:

1.2.1.1 All Petroleum Marketing Firms owning 1,000 or more UST Systems storing Regulated Substance, and other UST Systems 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 Utilities Service, shall comply by January 24, 1989.

1.2.1.2 All Petroleum Marketing Firms owning 100-999 UST Systems storing Regulated Substance shall comply by October 26, 1989.

1.2.1.3 All Petroleum Marketing Firms owning 13 99 UST Systems storing Regulated Substance shall comply by April 26, 1991.

1.2.1.4 All Hazardous Substance UST System Owners or Operators shall comply by December 31, 2008.

1.2.1.5 All UST System Owners not described in Part F, subsections 1.2.1.1, 1.2.1.2, 1.2.1.3 or 1.2.1.4, including all Local Government entities shall comply by December 31, 1993.

1.3 Amount and Scope of Financial Responsibility

1.3.1 Per-Occurrence Financial Responsibility Amounts

1.3.1.1 Owners or Operators of UST Systems shall demonstrate financial responsibility for taking Corrective Action and for compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases from the operation of UST Systems in at least the following per-Occurrence amounts:

1.3.1.1.1 For Owners or Operators of UST Systems that are located at Petroleum Marketing Facilities, or that handle an average of more than 10,000 gallons of Regulated Substance per month based on annual throughput for the previous calendar year, the demonstration of financial responsibility for Corrective Action and third-party liability shall be a minimum of one million dollars ($1,000,000) per Occurrence.

1.3.1.1.2 For Owners or Operators of Hazardous Substance UST Systems the demonstration of financial responsibility for Corrective Action and third-party liability shall be a minimum of one million dollars ($1,000,000) per Occurrence.

1.3.1.1.3 For Owners or Operators of UST Systems not described in Part F, subsections 1.3.1.1.1 or 1.3.1.1.2, the demonstration of financial responsibility for Corrective Action and third-party liability shall be a minimum of five hundred thousand dollars ($500,000) per Occurrence.

1.3.2 Annual Aggregate Financial Responsibility Amounts

1.3.2.1 Owners or Operators of UST Systems shall demonstrate financial responsibility for taking Corrective Action and for compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases from the operation of UST Systems in at least the following annual aggregate amounts:

1.3.2.1.1 For Owners or Operators of 1 to 100 UST Systems the demonstration of financial responsibility for Corrective Action and third-party liability shall be a minimum of one million dollars ($1,000,000) annual aggregate.

1.3.2.1.2 For Owners or Operators of 101 or more UST Systems the demonstration of financial responsibility for Corrective Action and third-party liability shall be a minimum of two million dollars ($2,000,000) annual aggregate.

1.3.3 For the purposes of Part F, subsection 1.3.2 only, "a UST System" means a single containment unit and does not mean a combination of single containment units.

1.3.4 The amount of financial responsibility required excludes legal defense and administrative costs.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

2.0 Financial Responsibility Mechanisms

2.1 Allowable Mechanisms and Combinations of Mechanisms

2.1.1 Except as provided by subsections 2.1.2 and 2.1.3 of this Section:

2.1.1.1 An Owner or Operator, including a Local Government Owner or Operator, may use any one or combination of the mechanisms listed in Part F, subsections 2.2 through 2.7 and 2.12, inclusive, to demonstrate financial responsibility under Part F for one or more UST Systems, and

2.1.1.2 A Local Government Owner or Operator may use any one or combination of the mechanisms listed in Part F, subsections 2.8 through 2.11, inclusive, to demonstrate financial responsibility under this Part for one or more UST Systems.

2.1.2 An Owner or Operator may use a guarantee or surety bond to establish financial responsibility only if the State's Attorney General has submitted a written statement to the Department that a guarantee or surety bond executed as described in this Part is a legally valid and enforceable obligation in the State of Delaware.

2.1.3 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.

2.1.4 Except as provided in Part F, subsection 2.1.5, if the Owner or Operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for taking Corrective Action and compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases the amount of financial responsibility provided by the combination of mechanisms shall be in the full amount specified in Part F, subsection 1.3.

2.1.5 If an Owner or Operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different UST Systems, the annual aggregate required shall be based on the number of Tanks covered by each such separate mechanism or combination of mechanisms.

2.1.6 Where an Owner or Operator uses a combination of separate mechanisms to cumulatively demonstrate financial responsibility, the mechanisms shall clearly and expressly state the order and priority of the mechanisms in paying for Corrective Action or compensation of third parties. Such order and priority shall be consistent with all regulatory requirements for demonstrating financial responsibility.

2.2 Self-Insurance

2.2.1 To satisfy the requirements of Part F, subsection 1.3 by utilizing self-insurance, the Owner, Operator, or Guarantor shall:

2.2.1.1 Submit documentation that the requirements of either the financial test in Part F, subsection 2.2.2, Alternative I Net Worth Test, or Part F, subsection 2.2.3. Alternative II Net Working Capital Test, are met based on year-end financial statements for the latest completed Financial Reporting Year, utilizing a form provided by the Department, as found in subsection 3.1, Form A of these Regulations, to provide the required documentation; and

2.2.1.2 Submit a letter from the Chief Financial Officer, utilizing a form provided by the Department, as found in subsection 3.1, Form A of these Regulations, worded exactly as shown, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted; and

2.2.1.3 Submit the documentation required in Part F, subsections 2.2.1.1 and 2.2.1.2 to the Department, signed by the Chief Financial Officer of the Owner, Operator, or Guarantor, within one hundred twenty (120) Days of the close of each fiscal year.

2.2.2 Alternative I Financial Test- Net Worth Test Requirements

2.2.2.1 The Owner, Operator, or Guarantor, shall have a Tangible Net Worth of at least $10 million; and

2.2.2.2 The Owner, Operator, or Guarantor, shall have a Tangible Net Worth of at least ten times the sum of the following:

2.2.2.2.1 The total of the applicable Annual Aggregate amount required by Part F, subsection 1.3 of these Regulations based on the number of UST Systems for which a financial test is used to demonstrate financial responsibility to the Department under Part F, less the amount obtained through another mechanism or combination of mechanisms in accordance with Part F, subsection 2.1 of these Regulations; and

2.2.2.2.2 The sum of the Corrective Action cost estimates, the current closure and post-closure care cost estimates, current plugging and abandonment cost estimates and any other liability coverage for the which the Owner or Operator is using a financial test to demonstrate financial responsibility to the State or EPA, (this includes but is not limited to Subtitle C Hazardous Waste facilities, SDWA hazardous waste injection wells and Aboveground Storage Tanks); and

2.2.2.3 The Owner, Operator, or Guarantor, shall either:

2.2.2.3.1 File financial statements annually with the U.S. Securities and Exchange Commission (SEC), the Energy Information Administration (EIA), or the Rural Utilities Service (RUS); or

2.2.2.3.2 Annually report the firm's Tangible Net Worth to Dun & Bradstreet, and Dun & Bradstreet shall have assigned the firm a financial strength rating of 4A or 5A; and

2.2.2.4 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.

2.2.3 Alternative II Financial Test - Net Working Capital Test Requirements

2.2.3.1 The Owner, Operator, or Guarantor shall have a Tangible Net Worth of at least $10 million; and

2.2.3.2 The Owner, Operator, or Guarantor shall have a Tangible Net Worth of six (6) times the sum of the following:

2.2.3.2.1 The applicable Annual Aggregate amount required by Part F, subsection 1.3 less the amount obtained through another mechanism or combination of mechanisms in accordance with Part F, subsection 2.1, for which a financial test is used to demonstrate financial responsibility to the Department under this Section; and

2.2.3.2.2 The sum of the Corrective Action cost estimates, the current closure and post-closure care cost estimates, current plugging and abandonment cost estimates and any other liability coverage for the which the Owner or Operator is using a financial test to demonstrate financial

responsibility to the State or EPA, (this includes but is not limited to Subtitle C Hazardous Waste facilities, SDWA hazardous waste injection wells and aboveground storage tanks); and

2.2.3.3 The Owner, Operator, or Guarantor shall have either:

2.2.3.3.1 At least ninety percent (90%) of assets in the United States; or

2.2.3.3.2 U.S. assets at least six (6) times the sum of the following:

2.2.3.3.2.1 The applicable Annual Aggregate amount required by Part F. subsection 1.3 less the amount obtained through another mechanism or combination of mechanisms in accordance with Part F, subsection 2.1, for which a financial test is used to demonstrate financial responsibility to the Department under this Section; and

2.2.3.3.2.2 The sum of the Corrective Action cost estimates, the current closure and post-closure care cost estimates, current plugging and abandonment cost estimates and any other liability coverage for the which the Owner or Operator is using a financial test to demonstrate financial responsibility to the State or EPA, (this includes Subtitle C Hazardous Waste facilities, SDWA hazardous waste injection wells and aboveground storage tanks); and

2.2.3.4 The Owner, Operator, or Guarantor shall have either:

2.2.3.4.1 Net working capital of at least six (6) times the sum of the following:

2.2.3.4.1.1 The applicable Annual Aggregate amount required by Part F, subsection 1.3 less the amount obtained through another mechanism or combination of mechanisms in accordance with Part F, subsection 2.1, for which a financial test is used to demonstrate financial responsibility to the Department under this Section; and

2.2.3.4.1.2 Any other liability coverage for which the Owner or Operator is using the test to demonstrate financial responsibility to the State or EPA, (this includes Subtitle C Hazardous Waste Facilities, SDWA Hazardous Waste Injection Wells, Subtitle I Underground Storage Tank Facilities); or

2.2.3.4.2 A current Standard & Poor's bond rating of AAA, AA, A or BBB, or a current Moody's bond rating of Aaa, Aa, A or Baa for the most recent bond issuance.

2.2.3.5 The fiscal year-end financial statements of the Owner, Operator, or Guarantor, shall be independently audited, and cannot include an adverse auditor's opinion, a disclaimer of opinion, or a going concern qualification.

2.2.3.6 If the financial statements of the Owner, Operator, or Guarantor are not submitted annually to the U.S. Securities and Exchange Commission (SEC), the Energy Information Administration (EIA) or the Rural Utilities Service (RUS) the Owner, Operator, or Guarantor using the Alternative II test, shall obtain a special report by an independent certified public accountant which contains the accountant's certification that there are no material differences between the financial data in the submission required under Part F, subsection 2.2.1.3 and the independently audited year-end financial statements and footnotes for the latest completed Financial Reporting Year.

2.2.3.7 If an Owner or Operator finds that he or she no longer meets the Requirements of Part F, subsection 2.2, the Owner or Operator shall obtain alternative coverage within one hundred (150) Days of the latest completed Financial Reporting Year.

2.2.3.8 The Department may require reports of financial condition at any time from the Owner, Operator, or Guarantor. If the Department finds, on the basis of such reports or other information, that the Owner, Operator, or Guarantor no longer meets the requirements of Part F, subsection 2.2, the Owner or Operator shall obtain alternate coverage within thirty (30) Days after notification by Verifiable Service of such a finding.

2.2.3.9 If the Owner or Operator fails to obtain alternate financial assurance within one hundred fifty (150) Days of finding that he or she no longer meets the Requirements of Part F, subsection 2.2, or within thirty (30) Days of notification by the Department that he or she no longer meets the Requirements of Part F, subsection 2.2, the Owner or Operator shall notify the Department of such failure by Verifiable Service within ten (10) Days.

2.3 Guarantee

2.3.1 To satisfy the requirements of Part F, subsection 1.3 of these Regulations the Owner or Operator may obtain a guarantee that conforms to the requirements of this Section.

2.3.2 The Guarantor shall be a business entity that:

2.3.2.1 Possesses a Controlling Interest in the Owner or Operator; or

2.3.2.2 Possesses a Controlling Interest in a firm that has a Controlling Interest in the Owner or Operator; or

2.3.2.3 Is an affiliate which is controlled through stock ownership by a common parent firm that possesses a Controlling Interest in the Owner or Operator; or

2.3.2.4 Is engaged in a Substantial Business Relationship with the Owner or Operator and is issuing the guarantee as an act incident to that business relationship.

2.3.3 The Guarantor shall:

2.3.3.1 Comply with the requirements of Part F, subsection 2.2 of these Regulations; and

2.3.3.2 Submit a Guarantee utilizing a form provided by the Department, as found in Part F, subsection 3.2, Form B of these Regulations, worded exactly as shown, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted; and

2.3.3.3 Submit the completed Guarantee and the required submissions of Part F, subsection 2.2 of these Regulations to the Department; and

2.3.3.4 Provide the Owner or Operator with copies of their submissions under Part F, subsection 2.2 of these Regulations.

2.3.4 If the Guarantor fails to meet the requirements of the financial test at the end of any Financial Reporting Year, within one hundred twenty (120) Days of the end of that Financial Reporting Year the Guarantor shall send by Verifiable Service, before cancellation or non renewal of the guarantee, notice to the Owner or Operator and to the Department. The guarantee will terminate no less than one hundred twenty (120) Days after the date the Owner or Operator receives the notification, as evidenced by Verifiable Service. The Owner or Operator shall obtain alternative coverage as specified in Part F, subsection 2.15 of these Regulations.

2.3.5 If the Department notifies the Guarantor that he no longer meets the Requirements of Part F, subsection 2.2.1.1 of these Regulations, the Guarantor shall notify the Owner or Operator by Verifiable Service within ten (10) Days of receiving such notification from the Department. The guarantee will terminate no less than one hundred twenty (120) Days after the date the Owner or Operator receives the notification, as evidenced by Verifiable Service. The Owner or Operator shall obtain alternative coverage as specified in Part F, subsection 2.14 of these Regulations.

2.3.6 The Owner or Operator who uses a guarantee to satisfy the Requirements of Part F, subsection 1.3 of these Regulations shall also establish a standby trust fund at the same time that the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the Guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Department under Part F, subsection 2.15 of these Regulations. This standby trust fund shall meet the requirements specified in Part F, subsection 2.12 of these Regulations.

2.3.7 An Owner or Operator may use a guarantee to establish financial responsibility only if the State's Attorney General has submitted a written statement to the Department that a guarantee executed as described in this Section is a legally valid and enforceable obligation in the State of Delaware.

2.4 Insurance and Risk Retention Group Coverage

2.4.1 An Owner or Operator may satisfy the requirements of Part F, subsection 1.3 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.

2.4.2 The Owner or Operator shall submit an amendment to an insurance policy utilizing a form provided by the Department, as found in Part F, subsection 3.3, Form C of these Regulations, worded exactly as shown, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted or shall submit a certificate of insurance utilizing a form provided by the Department, as found in Part F, subsection 3.4, Form D of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.4.3 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 and has a current Standard & Poor's rating of AAA, AA, A or BBB, or a current Moody's rating of Aaa, Aa, A or Baa, or current A.M Best rating of A++, A+, A, A-, B++ or B+ or equivalent.

2.4.4 Exclusions for payments of claims related to voluntary UST System removals and voluntary UST System Site Assessments and investigations do not meet the financial responsibility requirements of 40 CFR 280, Subpart H. Insurance policies submitted to meet the requirements of Part F, subsection 1.3 shall not contain voluntary exclusions.

2.4.5 If self-insured retentions are included as part of an insurance policy, it shall only cover the portion of a policy from the inception date of the policy back to the retroactive date of the policy. Self-insured retentions

will be considered a partial mechanism and such retentions are acceptable with a combination of mechanisms to comply with Part F, subsection 1.3.

2.5 Surety Bond

2.5.1 An Owner or Operator may satisfy the requirements of Part F, subsection 1.3 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.

2.5.2 The Owner or Operator shall submit a surety bond utilizing a form provided by the Department, as found in Part F, subsection 3.5, Form E of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.5.3 Under the terms of the bond, the surety will 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 levels of financial responsibility required by Part F, subsection 1.3 of these Regulations.

2.5.4 The Owner or Operator who uses a surety bond to satisfy the requirements of Part F, subsection 1.3 of these Regulations shall also 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 will be deposited directly into the standby trust fund in accordance with instructions from the Department in accordance with Part F, subsection 2.15 of these Regulations. This standby trust fund shall meet the requirements specified in Part F, subsection 2.12 of these Regulations.

2.5.5 An Owner or Operator may use a surety bond to establish financial responsibility only if the State's Attorney General has submitted a written statement to the Department that a surety bond executed as described in this Section is a legally valid and enforceable obligation in the State of Delaware.

2.5.6 The surety(ies) company may cancel the bond by sending notice of cancellation to the Owner or Operator and the Department by Verifiable Service, provided, however, that cancellation shall not occur during the one hundred twenty (120) Days beginning on the date of receipt of the notice of cancellation by the Owner and Operator as evidenced by Verifiable Service. The Owner or Operator shall obtain alternative coverage as specified in Part F, subsection 2.15 of these Regulations.

2.5.7 If the Department notifies the Owner or Operator that the surety(ies) company no longer meets the requirements of this Section, the Owner or Operator shall obtain alternative coverage as specified in Part F, subsection 2.15 of these Regulations.

2.6 Letter of Credit

2.6.1 An Owner or Operator may satisfy the requirements of Part F, subsection 1.3 of these Regulations by obtaining an irrevocable standby letter of credit that conforms to the Requirements of this Section and is issued by an institution that has authority to issue letters of credit in the State of Delaware and whose letter of credit operations are regulated and examined by a federal or State agency.

2.6.2 The Owner or Operator shall submit an irrevocable standby letter of credit utilizing a form provided by the Department, as found in Part F, subsection 3.6, Form F of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted. To meet the Requirements of this Section, the letter of credit shall list the State of Delaware Department of Natural Resources and Environmental Control as the sole beneficiary. Naming multiple states as the beneficiary is not acceptable.

2.6.3 An Owner or Operator who uses a letter of credit to satisfy the Requirements of Part F, subsection 1.3 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 Department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Department under Part F, subsection 2.15 of these Regulations. This standby trust fund shall meet the requirements specified in Part F, subsection 2.12 of these Regulations.

2.6.4 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 from the same term as the original term, unless, at least one hundred twenty (120) Days before the current expiration date, the issuing institution notifies the Owner or Operator by Verifiable Service of its decision not to renew the letter of credit. Under the terms of the letter of credit, the one hundred twenty (120) Days will begin on the date when the Owner or Operator receives the notice, as evidenced by the Verifiable Service.

2.7 Trust Fund

2.7.1 An Owner or Operator may satisfy the requirements of Part F, subsection 1.3 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.

2.7.2 The Owner or Operator shall submit a trust agreement, utilizing a form provided by the Department, as found in Part F, subsection 3.7, Form G of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted and shall be accompanied by a formal certification of acknowledgment as specified in Part F, subsection 3.7, Form G of these Regulations.

2.7.3 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.

2.7.4 If the value of the trust fund is greater than the required amount of coverage, the Owner or Operator may submit a written request by Verifiable Service to the Department for release of the excess.

2.7.5 If other financial assurance as specified in this Section is substituted for part of the trust fund, the Owner or Operator may submit a written request by Verifiable Service to the Department for release of the excess.

2.7.6 Within sixty (60) Days after receiving a request from the Owner or Operator for release of funds as specified in Part F, subsections 2.7.4 or 2.7.5 of these Regulations, the Department will instruct the trustee to release to the Owner or Operator such funds as the Department specifies in writing by Verifiable Service.

2.8 Local Government Bond Rating Test

2.8.1 A general purpose Local Government Owner or Operator or Local Government serving as a Guarantor may satisfy the requirements of Part F, subsection 1.3 of these Regulations by having a currently outstanding issue or issues of general obligation bonds of at least the minimum Annual Aggregate amount required in Part F, subsection 1.3 of these Regulations excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where a Local Government has multiple outstanding issues, or where a Local Government's bonds are rated by both Moody's and Standard & Poor's, the lowest rating shall be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance shall not be considered in determining the amount of applicable bonds outstanding.

2.8.2 A Local Government Owner or Operator or Local Government serving as a Guarantor that is not a general-purpose Local Government and does not have the legal authority to issue general obligation bonds may satisfy the requirements of Part F, §1.3 of these Regulations by:

2.8.2.1 Having a currently outstanding issue or issues of revenue bonds of at least $1 million dollars ($1,000,000) excluding refunded issues; and

2.8.2.2 Having a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the Local Government. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond shall be used to determine eligibility. Bonds that are backed by credit enhancement shall not be considered in determining the amount of applicable bonds outstanding.

2.8.3 The Local Government Owner or Operator or Guarantor using the Local Government bond rating test shall maintain a copy of its bond rating published within the last twelve (12) months by Moody's or Standard & Poor's.

2.8.4 To demonstrate that it meets the Local Government bond rating test, the Chief Financial Officer of a general purpose Local Government Owner, Operator or Guarantor shall submit a letter signed by the Chief Financial Officer, utilizing a form provided by the Department, as found in Part F, subsection 3.10, Form J of these Regulations, worded exactly as shown, except that instructions in brackets are to be replaced by the relevant information and the brackets deleted.

2.8.5 To demonstrate that it meets the Local Government bond rating test, the Chief Financial Officer of a Local Government Owner, Operator, or Guarantor other than a general purpose government, shall submit a letter signed by the Chief Financial Officer, utilizing a form provided by the Department, as found in Part F, subsection 3.11, Form K of these Regulations, worded exactly as shown, except that instructions in brackets are to be replaced by the relevant information and the brackets deleted.

2.8.6 The Department may require reports of financial condition at any time from the Local Government Owner, Operator, or Local Government Guarantor. If the Department finds, on the basis of such reports or other information, that the Local Government Owner, Operator, or Guarantor, no longer meets the Local Government bond rating test Requirements of this Section, the Local Government Owner or Operator shall obtain alternative coverage within thirty (30) Days after notification of such a finding.

2.8.7 If a Local Government Owner or Operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the Local Government Owner or Operator shall obtain alternative coverage within one hundred fifty (150) Days of the Change In Service.

2.8.8 If a Local Government Owner or Operator fails to obtain alternate assurance within 150 Days of finding that it no longer meets the requirements of the bond rating test or within thirty (30) Days of notification by the Department that it no longer meets the requirements of the bond rating test, the Owner or Operator must notify the Department of such failure within ten (10) Days.

2.9 Local Government Financial Test

2.9.1 A Local Government Owner or Operator may satisfy the requirements of Part F, subsection 1.3 of these Regulations by passing the financial test specified in this Section. To be eligible to use the financial test, the Local Government Owner or Operator shall have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the Local Government financial test, the Owner or Operator shall meet the criteria of Part F, subsections 2.9.3 and 2.9.4 of these Regulations based on year-end financial statements for the latest completed Financial Reporting Year.

2.9.2 The Local Government Owner or Operator shall have the following information available, as shown in the year-end financial statements for the latest completed fiscal year:

2.9.2.1 Total Revenues: Consists of the sum of general fund operating and non operating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the Local Government using the financial test (interfund transfers), liquidation of investments, and issuance of debt.

2.9.2.2 Total Expenditures: Consists of the sum of general fund operating and non operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues. For purposes of this test, the calculation of total expenditures shall exclude all transfers between funds under the direct control of the Local Government using the financial test (interfund transfers).

2.9.2.3 Local Revenues: Consists of total revenues (as defined in Part F, subsection 2.9.2.1 of these Regulations) minus the sum of all transfers from other governmental entities, including all monies received from Federal, State, or Local Government sources.

2.9.2.4 Debt Service: Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on noninterest bearing short term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

2.9.2.5 Total Funds: Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the Local Government's Financial Reporting Year. Includes Federal securities, Federal agency securities, State and Local Government securities, and other securities such as bonds, notes and mortgages. For purposes of this test, the calculation of total funds shall exclude agency funds, private trust funds, accounts receivable, value of real property, and other non security assets.

2.9.2.6 Population: Consists of the number of people in the area served by the Local Government.

2.9.3 The Local Government's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The Local Government cannot have outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

2.9.4 The Local Government Owner or Operator shall have a letter signed by the Chief Financial Officer, utilizing a form provided by the Department, as found in Part F, subsection 3.12, Form L of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.9.5 To demonstrate that it meets the financial test under Part F, subsection 2.9.2 of these Regulations, within one hundred twenty (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, the Chief Financial Officer of the Local Government Owner or Operator, shall sign and submit a letter, utilizing a form provided by the Department, as found in Part F, subsection 3.12, Form L of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.9.6 If a Local Government Owner or Operator using the test to provide financial assurance finds that it 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 one hundred fifty (150) Days of the end of the year for which financial statements have been prepared.

2.9.7 The Department may require reports of financial condition at any time from the Local Government Owner or Operator. If the Department finds, on the basis of such reports or other information, that the Local Government Owner or Operator no longer meets the financial test requirements of Part F, subsections 2.9.2 through 2.9.5 of these Regulations, the Owner or Operator shall obtain alternate coverage within thirty (30) Days after notification of such a finding.

2.9.8 If the Local Government Owner or Operator fails to obtain alternate assurance within one hundred fifty (150) Days of finding that it no longer meets the requirements of the financial test based on the year-end financial statements or within thirty (30) Days of notification by the Department that it no longer meets the requirements of the financial test, the Owner or Operator shall notify the Department of such failure within ten (10) Days.

2.10 Local Government Guarantee

2.10.1 A Local Government Owner or Operator may satisfy the requirements of Part F, subsection 1.3 of these Regulations by obtaining a guarantee that conforms to the requirements of this Section. The Guarantor shall be either the State in which the Local Government Owner or Operator is located or a Local Government having a Substantial Governmental Relationship with the Owner or Operator and issuing the guarantee as an act incident to that relationship. A Local Government acting as the Guarantor shall:

2.10.1.1 Demonstrate that it meets the bond rating test requirement of Part F, subsection 2.8 and deliver a copy of the completed Chief Financial Officer's letter as stipulated in Part F, subsection 2.8.4 of these Regulations to the Local Government Owner or Operator; or

2.10.1.2 Demonstrate that it meets the worksheet test requirements of Part F, subsection 2.9 of these Regulations and deliver a copy of the completed Chief Financial Officer's letter as stipulated in Part F, subsection 2.8.5 of these Regulations to the Local Government Owner or Operator; or

2.10.1.3 Demonstrate that it meets the Local Government fund requirements of Part F, subsections 2.11.1.1, 2.11.1.2, or 2.11.1.3 of these Regulations and deliver a copy of the completed Chief Financial Officer's letter as stipulated in Part F subsection 2.11.2 of these Regulations to the Local Government Owner and Operator.

2.10.2 If the Local Government Guarantor is unable to demonstrate financial assurance under any of the mechanisms in Part F, subsections 2.8, 2.9, or 2.11 of these Regulations, at the end of the Financial Reporting Year, the Guarantor shall send by Verifiable Service, before cancellation or non renewal of the guarantee, notice to the Owner or Operator and to the Department. The guarantee will terminate no less than one hundred twenty (120) Days after the date the Owner or Operator receives the notification, as evidenced by Verifiable Service. The Owner or Operator shall obtain alternative coverage as specified in Part F, subsection 2.14 of these Regulations.

2.10.3 The Owner or Operator shall submit a guarantee agreement, utilizing a form provided by the Department, as found in Part F, subsection 3.14, Form N, Part F, subsection 3.15, Form O or Part F, subsection 3.16, Form P of these Regulations, depending on which of the following alternative guarantee arrangements is selected:

2.10.3.1 If, in the default or incapacity of the Owner or Operator, the Guarantor guarantees to fund a standby trust as directed by the Department, the guarantee shall be worded exactly as specified in Part F, subsection 3.13, Form M or Part F, subsection 3.14, Form N of these Regulations, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.10.3.2 If, in the default or incapacity of the Owner or Operator, the Guarantor guarantees to make payments as directed by the Department for taking Corrective Action or compensating third parties for Bodily Injury and Property Damage, the guarantee shall be worded exactly as specified in Part

F, subsection 3.15, Form O or subsection 3.16, Form P of these Regulations, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.10.3.3 If the Guarantor is a State, the Local Government guarantee with standby trust shall be worded exactly as specified in Part F, subsection 3.13, Form M of these Regulations, except that instructions in brackets are to be replaced with relevant information and the brackets deleted.

2.10.3.4 If the Guarantor is a Local Government, the Local Government guarantee with standby trust shall be worded exactly as specified in Part F, subsection 3.14, Form N of these Regulations, except that instructions in brackets are to be replaced with relevant information and the brackets deleted.

2.10.3.5 If the Guarantor is a State, the Local Government guarantee without standby trust shall be worded exactly as specified in Part F, subsection 3.15, Form O of these Regulations, except that instructions in brackets are to be replaced with relevant information and the brackets deleted.

2.10.3.6 If the Guarantor is a Local Government, the Local Government guarantee without standby trust shall be worded exactly as specified in Part F, subsection 3.16, Form P of these Regulations, except that instructions in brackets are to be replaced with relevant information and the brackets deleted.

2.10.4 A Local Government Owner or Operator using the Local Government guarantee under Part F, subsection 2.10, where the Guarantor's demonstration of financial responsibility relies on the bond rating test under Part F, subsection 2.8 of these Regulations shall maintain a copy of the Guarantor's bond rating published within the last twelve (12) months by Moody's or Standard & Poor's.

2.10.5 A Local Government Owner or Operator using the Local Government guarantee supported by the Local Government fund as prescribed in Part F, subsection 2.11 of these Regulations, shall maintain a copy of the Guarantor's year-end financial statements for the most recent completed Financial Reporting Year showing the amount of the fund.

2.11 Local Government Fund

2.11.1 A Local Government Owner or Operator may satisfy the requirements of Part F, subsection 1.3 by establishing a dedicated fund account that conforms to the requirements of this Section. Except as specified in Part F, subsection 2.11.1.2 of these Regulations, a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

2.11.1.1 The fund is dedicated by State constitutional provision, or Local Government statute, charter, ordinance, or order to pay for taking Corrective Action and for compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of UST Systems and is funded for the full amount of coverage required under Part F, subsection 1.3 of these Regulations, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage; or

2.11.1.2 The fund is dedicated by State constitutional provision, or Local Government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking Corrective Action and compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of UST Systems, and is funded for five times the full amount of coverage required under Part F, subsection 1.3 of these Regulations, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage. If the fund is funded for less than five times the amount of coverage required under Part F, subsection 1.3 of these Regulations, the amount of financial responsibility demonstrated by the fund shall not exceed one-fifth the amount in the fund; or

2.11.1.3 The fund is dedicated by State constitutional provision, or Local Government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of UST Systems. A payment is made to the fund once every year for seven years until the fund is fully funded. This seven year period is hereafter referred to as the "pay in period". The amount of each payment shall be determined by this formula: (TF-CF)/Y, where TF is the total required financial assurance for the Owner or Operator, CF is the current amount in the fund, and Y is the number of years remaining in the pay in period, and

2.11.1.3.1 The Local Government Owner or Operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking Corrective Action and for

compensating third parties for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of UST Systems, or

2.11.1.3.2 The Local Government Owner or Operator has a letter signed by the appropriate State Attorney General stating that the use of the bonding authority will not increase the Local Government's debt beyond the legal debt ceilings established by the relevant State laws. The letter shall also state that prior voter approval is not necessary before use of the bonding authority.

2.11.2 To demonstrate that it meets the requirements of the Local Government fund, the Chief Financial Officer of the Local Government Owner or Operator or Guarantor, shall submit a letter to the Department, utilizing a form provided by the Department, found in Part F, subsection 3.17, Form Q of these Regulations, worded exactly as shown, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

2.11.3 An Owner or Operator using a Local Government fund under Part F, subsection 2.11 of these Regulations shall maintain the following documents:

2.11.3.1 A copy of the State constitutional provision or Local Government statute, charter, ordinance, or order dedicating the fund; and

2.11.3.2 Year-end financial statements for the most recent completed Financial Reporting Year showing the amount in the fund. If the fund is established under Part F, subsection 2.11.1.3 of these Regulations using incremental funding backed by bonding authority, the financial statements shall show the previous year's balance, the amount of funding during the year, and the closing balance in the fund; and

2.11.3.3 If the fund is established under Part F, subsection 2.11.1.3 of these Regulations using incremental funding backed by bonding authority, the Owner or Operator shall also maintain documentation of the required bonding authority, including either the results of voter referendum under Part F, subsection 2.11.1.3.1 of these Regulations, or attestation by the State Attorney General as specified under Part F, subsection 2.11.1.3.2 of these Regulations.

2.12 Standby Trust Fund

2.12.1 An Owner or Operator using any one of the mechanisms authorized by Part F, subsections 2.3, 2.5, 2.6, and 2.7 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 an agency of the State in which the fund is established.

2.12.2 The Owner or Operator shall submit a standby trust agreement to the Department, utilizing a form provided by the Department, as found in Part F, subsection 3.8 Form H of these Regulations, worded exactly as specified except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

2.12.3 The Department will instruct the trustee to refund the balance of the standby trust fund to the Provider of Financial Assurance if the Department determines that no additional Corrective Action costs or third party liability claims will occur as a result of a Release covered by the financial assurance mechanism for which the standby trust fund was established.

2.12.4 An Owner or Operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this Part.

2.13 Substitution of Financial Assurance Mechanisms

2.13.1 An Owner or Operator may substitute any alternate financial assurance mechanisms as specified in this Part, provided that at all times the Owner or Operator maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the Requirements of Part F, subsection 1.3 of these Regulations.

2.13.2 After obtaining alternate financial assurance as specified in this Part, an Owner or Operator may cancel a financial assurance mechanism by providing notice as evidenced by Verifiable Service, to the Provider of Financial Assurance and submitting a copy of such notice to the Department.

2.14 Cancellation or Non Renewal, Bankruptcy or Other Incapacity of Owner or Operator or Provider of Financial Assurance

2.14.1 Cancellation or Non-Renewal:

2.14.1.1 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 Verifiable Service to the Owner or Operator and the Department, subject to the following:

2.14.1.1.1 Termination of a Local Government guarantee, a guarantee, a surety bond or a letter of credit may not occur until one hundred twenty (120) Days after the date on which the Owner or Operator receives the notice of Termination, as evidenced by Verifiable Service.

2.14.1.1.2 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 sixty (60) Days after the date on which the Owner or Operator and the Department receives the notice of Termination, as evidenced by Verifiable Service.

2.14.1.1.3 Termination for non payment of premium or misrepresentation by the insured may not occur until a minimum of ten (10) Days after the date on which the Owner or Operator receives the notice of Termination, as evidenced by Verifiable Service.

2.14.1.1.4 The Owner or Operator shall notify the Department within ten (10) Days upon receiving notification of cancellation or non-renewal subject to the Requirements of Part F, subsection 2.14.1 of these Regulations.

2.14.1.1.5 In the event of Termination or nonrenewal of liability insurance coverage used to meet the financial responsibility requirements, the insurer shall notify the Department of Termination or nonrenewal not more than ten (10) Days after the notice of Termination or nonrenewal. The notice shall state the name and address of the insured, the date of Termination or nonrenewal, the address(es) of the Facility(ies) previously insured and reason for Termination or nonrenewal.

2.14.1.2 If a Provider of Financial Assurance cancels or fails to renew for reasons other than the incapability of the provider as specified in Part F, subsection 2.14.2 of these Regulations, the Owner or Operator shall obtain alternate coverage within sixty (60) Days after receipt of the notice of Termination. If the Owner or Operator fails to obtain alternate coverage within sixty (60) Days after receipt of the notice of Termination, the Owner or Operator shall notify the Department of such failure within ten (10) Days and submit the following to the Department:

2.14.1.2.1 The name and address of the Provider of Financial Assurance; and

2.14.1.2.2 The effective date of Termination; and

2.14.1.2.3 The evidence of the financial assurance mechanism subject to the Termination maintained in accordance with Part F, subsection 1.1.7 of these Regulations.

2.14.2 Bankruptcy or Other Incapacity of Owner or Operator or Provider of Financial Assurance

2.14.2.1 Within ten (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 Department by Verifiable Service of such commencement and shall submit the appropriate documentation as referenced in Part F, subsections 2.2 through 2.12 and Forms A-Q of these Regulations demonstrating current compliance with the financial responsibility requirements of Part F.

2.14.2.2 Within ten (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 as required under the terms of the guarantee and the Department by Verifiable Service of such commencement.

2.14.2.3 Within ten (10) Days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a Local Government Owner or Operator as debtor, the Local Government Owner or Operator shall notify the Department by Verifiable Service of such commencement and shall submit the appropriate documentation as referenced in Part F, subsections 2.2 through 2.12 and Forms A-Q of these Regulations demonstrating current compliance with the financial responsibility requirements of Part F.

2.14.2.4 Within ten (10) Days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a Guarantor providing a Local Government financial assurance as debtor, such Guarantor shall notify the Local Government Owner or Operator as required under the terms of the guarantee and the Department by Verifiable Service of such commencement.

2.14.2.5 Within ten (10) Days after the suspension or revocation of the authority of a Provider of Financial Assurance to issue a financial assurance mechanism, such provider shall notify the Owner or Operator by Verifiable Service of such suspension or revocation.

2.14.2.6 Within ten (10) Days after the failure of a Guarantor or indemnitor to meet the requirements of the financial test, such Guarantor or indemnitor shall notify the Owner or Operator and the Department by Verifiable Service of such failure.

2.14.2.7 Within ten (10) Days of receiving notification per Part F, subsections 2.14.2.2, 2.14.2.3 or 2.14.2.4 of these Regulations, the Owner shall notify the Department by Verifiable Service of the notice received per Part F, subsections 2.14.2.2, 2.14.2.3 or 2.14.2.4 of these Regulations.

2.14.2.8 An Owner or Operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of 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, or letter of credit.

2.14.2.9 Except in the case of financial test of self insurance, the Owner or Operator shall obtain alternate financial assurance within thirty (30) Days after receiving notice of a bankruptcy or incapacity of its Provider of Financial Assurance per Part F, subsection 2.14.2 of these Regulations. If the Owner or Operator does not obtain alternate coverage within thirty (30) Days after such notification, the Owner or Operator shall notify the Department within ten (10) Days.

2.14.2.10 An Owner or Operator who has a potential or existing claim filed with a Guarantor, indemnitor or other Provider of Financial Assurance who has filed a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code shall in a timely manner file a Proof of Claim and any necessary supporting documentation with the Court of appropriate jurisdiction and provide a copy of the Proof of Claim to the Department.

2.14.2.11 Within thirty (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 must obtain alternate financial assurance.

2.15 Drawing on Financial Assurance Mechanisms

2.15.1 Except as specified in Part F, subsection 2.15.4 of these Regulations, the Department shall require the Guarantor, surety, or institution issuing a letter of credit, to place the amount of funds stipulated by the Department, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

2.15.1.1 The Owner or Operator fails to establish alternate financial assurance within sixty (60) Days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanisms and the Department determines or suspects that a Release from an UST System covered by the mechanism has occurred and so notifies the Owner or Operator or the Owner or Operator has notified the Department pursuant to requirements established under Part E of these Regulations of a Release from an UST System covered by the mechanism; or

2.15.1.2 The conditions of Part F, subsections 2.15.2.1 or 2.15.2.2 of these Regulations are satisfied.

2.15.2 The Department may draw on a standby trust fund when:

2.15.2.1 The Department makes a final determination that a Release has occurred and immediate or long term Corrective Action for the Release is needed, but the Owner or Operator, after appropriate notice and opportunity to comply, has not conducted Corrective Action as required under Part E of these Regulations; or

2.15.2.2 The Department has received either:

2.15.2.2.1 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 specified by the Department, as found in Part F, subsection 3.9, Form I of these Regulations except that instructions in brackets are to be replaced with the relevant information and the brackets deleted; or

2.15.2.2.2 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 UST System covered by financial assurance under Part F and the Department determines that the Owner or Operator has not satisfied the judgment.

2.15.3 If the Department determines that the amount of Corrective Action costs and third party liability claims eligible for payment under Part F, subsection 2.15.2 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 Department shall pay third party liability claims in the order in which the Department receives certifications under Part F, subsection 2.15.2 of these Regulations.

2.15.4 A governmental entity acting as Guarantor under Part F, subsection 2.10, the Local Government guarantee without standby trust, shall make payments as directed by the Department under the circumstances described in Part F, subsections 2.15.1, 2.15.2, or 2.15.3 of these Regulations.

2.16 Release From the Requirements of Financial Responsibility

2.16.1 An Owner or Operator is no longer required to maintain financial responsibility under Part F for an UST System after the UST System has been Removed or Closed In Place in accordance with the requirements of these Regulations and the Requirements of Part E of these Regulations have been completed.

2.17 Replenishments of Required Financial Responsibility

2.17.1 If at any time after a standby trust is funded upon the instruction of the Department with funds drawn from a guarantee, Local Government guarantee with standby trust, 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:

2.17.1.1 Replenish the value of financial assurance to equal the full amount of coverage required, or

2.17.1.2 Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

2.17.2 For purposes of this Section, the full amount of coverage required is the amount of financial responsibility required by Part F, subsection 1.3 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.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

Part F: Forms

Section 3.1 Form A - Financial Test of Self Insurance
Section 3.2 Form B - Guarantee
Section 3.3 Form C - Endorsement
Section 3.4 Form D - Certificate of Insurance
Section 3.5 Form E - Surety Bond
Section 3.6 Form F - Irrevocable Standby Letter of Credit
Section 3.7 Form G - Trust Agreement
Section 3.8 Form H - Standby Trust Agreement
Section 3.9 Form I - Certificate of Valid Claim
Section 3.10 Form J - Bond Rating Test - General Purpose Local Government
Section 3.11 Form K - Bond Rating Test - Local Government/Other
Section 3.12 Form L - Local Government Financial Test
Section 3.13 Form M - Local Government Guarantee With Standby Trust Made By A State
Section 3.14 Form N - Local Government Guarantee With Standby Trust Made By A Local Government
Section 3.15 Form O - Local Government Guarantee Without Standby Trust Made By A State
Section 3.16 Form P - Local Government Guarantee Without Standby Trust Made By A Local Government
Section 3.17 Form Q - Local Government Fund Mechanism
Section 3.18 Form R - Tank Schedule for Financial Assurance

Section 3.1 **Form A: Financial Test of Self Insurance**

Letter from Chief Financial Officer

FC: 76
DNREC Facility ID#:

I am the Chief Financial Officer of [*name and address of the Owner or Operator or Guarantor*] This letter is in support of the use of [*the financial test of self-insurance" and/or "guarantee"*] to demonstrate financial responsibility for [*"taking corrective action" and/or "compensating third parties for Bodily Injury and Property Damage*] caused by [*"sudden Accidental Releases" and/or "non-sudden Accidental Releases"*] in the amount of at least [*dollar amount*] per occurrence and [*dollar amount*] Annual Aggregate arising from operating (an) Underground

Storage Tank(s) System(s).

UST Systems at the following facilities are assured by this financial test by this [*"Owner or Operator" and/or "Guarantor"*].

Attach Part F, Section 3.18, Form R, Underground Storage Tank Schedule of the Delaware Regulations Governing Underground Storage Tank Systems, listing each UST System assured by this Financial Test of Self-Insurance

A [*"financial test," and/or "guarantee"*] is also used by [*"Owner" or "Operator" or "Guarantor"*] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or State programs including but not limited to Subtitle C Hazardous Waste Facilities, SDWA Class I Hazardous Waste Injection Wells and AST pollution liability coverage.

	Amount
Closure	_____
Post-Closure Care	_____
Liability Coverage	_____
Corrective Action	_____
Plugging and Abandonment	_____
Other	_____
TOTAL	_____

This [*"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.

I hereby certify that the wording of this letter is identical to the wording specified in Part F, subsection 3.1, of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date shown immediately below.

_____

[*Signature of CF0*]

_____

[*Name of Person signing*]

_____

[*Title of Person signing*]

_____

[Date]

[Fill in the information for Alternative I if the criteria of Part F, subsection 2.2.2 of the Delaware *Regulations Governing Underground Storage Tank Systems* are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of Part F, subsection 2.2.3 of the Delaware *Regulations Governing Underground Storage Tank* are being used to demonstrate compliance with the financial test requirements.]

23 DE Reg. 581 (01/01/20)

Form A: Alternative I - Financial Test of Self Insurance
Net Worth Test

FC: 76
DNREC Facility ID#:

1. Amount of UST Annual Aggregate coverage being assured by a financial test, and/or guarantee:$_____
2. Amount of Corrective Action, closure and post-closure care costs, plugging and abandonment costs and other liability

coverage covered by a financial test, and/or guarantee:
(This includes but is not limited to Subtitle C Hazardous Waste Facilities,
SDWA Class I Hazardous Waste Injection Wells and AST coverage)$_____

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. Is line 6 at least $10 million? ……[ ]Yes [ ]No*
(Tangible Net Worth at least $10million)
8. Is line 6 at least 10 times line 3? ..... [ ]Yes [ ]No*
(Tangible Net Worth 10X's the sum of other environmental obligations)

***If the answer to line 7 or line 8 is "No", this test cannot be used to meet the UST Financial Responsibility requirements.**

Complete Lines 9-11 ***OR*** *Line 12*

9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission? ..... …….[ ]Yes [ ]No*
10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration? .....[ ]Yes [ ]No*
11. Have financial statements for the latest fiscal year been filed with the Rural Utilities Service? ..... …….[ ]Yes [ ]No*
12. Has financial information been provided to Dun & Bradstreet, and has Dun & Bradstreet provided a financial strength rating of 4A or 5A? (Answer "Yes" only if both criteria have been met.) .....[ ]Yes [ ]No*
13. Have year-end financial statements which do not include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification. (Answer "Yes" only if all criteria have been met)….. .....[ ]Yes [ ]No*

23 DE Reg. 581 (01/01/20)

Form A: Alternative II - Financial Test of Self Insurance
Net Working Capital Test

FC: 76
DNREC Facility ID#:

1. Amount of UST Annual Aggregate coverage being assured by a financial test, and/or guarantee: ..... $_____
2. Amount of Corrective Action, closure and post-closure care costs, plugging and abandonment costs and other liability coverage covered by a financial test, and/or guarantee:
(This includes but is not limited to Subtitle C Hazardous Waste Facilities,
SDWA Class I Hazardous Waste Injection Wells and aggregate AST coverage) $ _____
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 ninety percent (90%) of assets are located in the U.S.): ..... $ _____
8. Is line 6 at least $10 million? ..... [ ]Yes [ ]No*
   (Tangible Net Worth at least $10 million)
9. Is line 6 at least 6 times line 3? ..... [ ]Yes [ ]No*
   (Tangible Net Worth 6X's other environmental obligations)

***If the answer to line 8 or line 9 is "No", this test cannot be used to meet the UST Financial Responsibility requirements.**

10. Are at least 90 percent of assets located in the U.S.? …… [ ]Yes [ ]No*
    (If "No," complete line 11)
11. Is line 7 at least 6 times line 3?
    (U.S. assets at least six times the required amount of UST coverage plus other environmental liabilities) …… [ ]Yes [ ]No*

(*Complete 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? ..... …. [ ]Yes [ ]No*

-OR-

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 Securities and Exchange Commission (SEC), the Energy Information Administration (EIA), or the Rural Utilities Service (RUS)? ..... [ ]Yes [ ]No*

*(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).

20. The firm's year-end financial statements have been independently audited and do not include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification……[ ]Yes [ ]No*
    (Answer "Yes" only if all criteria have been met)

23 DE Reg. 581 (01/01/20)

Section 3.2 **Form B: Guarantee**

FC: 76
DNREC Facility ID#:

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 Department of Natural Resources and Environmental Control (Department) and to any and all third parties, and obligees, on behalf of [*Owner or Operator*] of [*Business Name and Address*].

Recitals

(1) Guarantor meets or exceeds the financial test criteria of Part F, subsection 2.2.1 or either subsections 2,2,2 or 2.2.3 of the Delaware *Regulations Governing Underground Storage Tank Systems* and agrees to comply with the requirements for Guarantors as specified in Part F, subsection 2.3 of the Delaware *Regulations Governing Underground Storage Tank Systems*.

(2) [*Owner or Operator*] owns or operates the following Underground Storage Tank Systems covered by this guarantee:

[*Attach Part F, Section 3.18. Form R, Tank Schedule, of the Delaware Regulations Governing Underground Storage Tank Systems, listing each UST System assured by this Guarantee.*]

This guarantee satisfies Part F, subsection 1.3 of the Delaware *Regulations Governing Underground Storage Tank Systems* for assuring funding for [insert: "*taking* Corrective Action" and/or "*compensating third parties for Bodily Injury and Property Damage*"] caused by Accidental Releases; (if coverage is different for different UST Systems or locations, indicate the type of coverage applicable to each UST or location) arising from operating the above-identified UST Systems 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 the Department and to any and all third parties that:

In the event that [*Owner or Operator*] fails to provide alternate coverage within sixty (60) Days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a Release has occurred at an UST Facility covered by this guarantee, the Guarantor, upon instructions from the Department, shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware Regulations Governing Underground Storage Tank Systems in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*Owner or Operator*] has failed to perform Corrective Action for Release arising out of the operation of the above-identified Underground Storage Tank System(s) in accordance with Part E of the Delaware *Regulations Governing Underground Storage Tank Systems*, the Guarantor upon written instructions from the Department shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Governing Underground Storage Tank Systems* 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 Accidental Releases arising from the operation of the above-identified UST Systems, 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 Department, shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Governing Underground Storage Tank Systems* 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 Part F subsection 2.2.1 and either subsections 2.2.2 or 2.2.3 of the Delaware *Regulations Governing Underground Storage Tank Systems*, Guarantor shall send within one hundred twenty (120) Days of such failure, by Verifiable Service, notice to [*Owner or Operator*]. The guarantee will terminate one hundred twenty (120) Days from the date of receipt of the notice by [*Owner or Operator*] as evidenced by Verifiable Service.

(5) Guarantor agrees to notify [*Owner or Operator*] by Verifiable Service of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming Guarantor as debtor, within ten (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 these Regulations.

(7) Guarantor agrees to remain bound under this guarantee for so long as [*Owner or Operator*] must comply with the applicable financial responsibility requirements of these regulations for the above-identified UST Systems, except that Guarantor may cancel this guarantee by sending notice by Verifiable Service to [*Owner or Operator*] such cancellation to become effective no earlier than one hundred twenty (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 [*Owner or Operator*] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily Injury to an employee of [*Owner or Operator*] arising from, and in the course of, employment by [*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 of, custody, or control of, or occupied by [*Owner or Operator*] that is not the direct result of a Release from an UST System;

(e) Bodily Injury or Property Damage for which [*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 Part F, subsection 1.3 of the Delaware *Regulations Governing Underground Storage Tank Systems*.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, 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 Part F, subsection 3.2 of the Delaware *Regulations Governing Underground Storage Tank Systems* 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:

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Section 3.3 **Form C: Endorsement**

FC: 76

DNREC Facility ID#:

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 Tank Systems:

Attach Part F, Section 3.18, Form R, Underground Storage Tank Schedule of the Delaware Regulations Governing Underground Storage Tank Systems, listing each UST System assured by this Endorsement.

For [insert: "*taking Corrective Action*" and/or "*compensating third parties for Bodily Injury and Property Damage*"] caused by 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 UST Systems or locations, indicate the type of coverage applicable to each UST System or location) arising from operating the UST(s) System(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 UST Systems or locations, indicate the amount of coverage for each type of coverage and/or for each UST System 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) through (e) of this Section 2 are hereby amended to conform with subsections (a) through (e):

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 from 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 Part F, subsections 2.2 through 2.11, of the Delaware *Regulations Governing Underground Storage Tank Systems*.

c. Whenever requested by the Department, the [*"Insurer" or "Group"*] agrees to furnish to the Department 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 ten (10) Days after a copy of such written notice is received by the insured.

e. [Insert for claims-made policies:

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 the 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 Part F, Section 3.3, Form C of the Delaware *Regulations Governing Underground Storage Tank Systems* 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"*].

_____

[*Date*]

_____

[*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]

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Section 3.4 **Form D: Certificate Of Insurance**

FC: 76

DNREC Facility ID#:

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 the 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 Systems:

Attach Appendix Section 3.18 Form R, Tank Schedule, listing each UST System assured by this Insurance Policy.

For [insert: *"taking Corrective Action"* and/or *"compensating third parties for Bodily Injury and Property Damage"*] caused by 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 UST System(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 UST System(s) or locations, indicate the amount of coverage for each type of coverage and/or for each UST System or location), exclusive of Legal Defense Costs which are subject to separate limits 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 Part F, subsections 2.2 through 2.11 of the Delaware *Regulations Governing Underground Storage Tank Systems*.

c. Whenever requested by the Department, the [*"Insurer" or "Group"*] agrees to furnish to the Department 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 ten (10) Days after a copy of such written notice is received by the insured.

e. [Insert for claims-made policies:

The insurance covers claims otherwise covered by the policy that are reported to the [*"Insurer" or "Group"*] within six (6) months of the effective date of the 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 Part F, Section 3.4 Form D of the Delaware *Regulations Governing Underground Storage Tank Systems* 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."*]

_____

[*Date*]

_____

[*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*]

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Section 3.5 **Form E: Performance Bond**

FC: 76

DNREC Facility ID#:

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:

Attach Section 3.18, Form R, Underground Storage Tank Schedule of the Delaware Regulations Governing Underground Storage Tank Systems, listing each UST System assured by this Performance Bond.

List the coverage guaranteed by the bond: [*"taking Corrective Action" and/or "compensating third parties for Bodily Injury and Property Damage"*] caused by Accidental Releases arising from operating the UST System(s).

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 Department, 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 7 **Del.C**. Chapter 74, as amended, to provide financial assurance for [*insert: "taking Corrective Action" and/or "compensating third parties for Bodily Injury and Property Damage"*] caused by Accidental Releases; (if coverage is different for different UST Systems or locations, indicate the type of coverage applicable to each UST System or location) arising from operating the UST System(s) 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 Part E of these regulations and the Department's instructions for, and/or compensate injured third parties for Bodily Injury and Property Damage*] caused by Accidental Releases arising from operating the UST System(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in Part F of these regulations, within one hundred twenty (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 [*Owner or Operator*] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily Injury to an employee of [*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 [*Owner or Operator*] that is not the direct result of a release from an UST System;

(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 Part F, subsection 1.3 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 Department that the Principal has failed to [*"take Corrective Action, in accordance with Part E of these Regulations and the Department's instructions," and/or "compensate injured third parties"*] as guaranteed by this bond, the Surety(ies) shall either perform [*"Corrective Action in accordance with Part E of these Regulations and the Department'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 Department under Part F, subsection 2.15 of these

Regulations.

Upon notification by the Department 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 Department 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 Department under Part F, subsection 2.15 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 Verifiable Service to the Principal, provided, however, that cancellation shall not occur during the one hundred and twenty (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 thereof, 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 Part F, Section 3.5 Form E of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date this bond was executed.

PRINCIPAL

_____

[*Signature(s)*]

_____

[*Name(s)*]

_____

[*Title(s)*]
[*Corporate seal*]

CORPORATE SURETY(IES)

[*Name*] _____
[*Address*]_____
State of Incorporation: _____
Liability limit: $ _____
[*Signature(s)*] 1. _____ 2. _____
[*Name(s) and title(s)*]1. _____

2. _____
[*Corporate seal*]

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

Bond Premium: $_____

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Section 3.6 **Form F: Irrevocable Standby Letter Of Credit**

FC: 76

DNREC Facility ID#:

_____
_____
_____
_____
[*Name and address of issuing institution*]

Delaware Department of Natural Resources and Environmental Control

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the State of Delaware Department of Natural Resources and Environmental Control's 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 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 the authority of 7 Del.C., Chapter 74."

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 Accidental Releases*] arising from operating the Underground Storage Tank Systems identified below in the amount of [*in words*] $[*insert dollar amount*] per Occurrence and [*in words*] $[*insert dollar amount*] Annual Aggregate:

Attach Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Letter of Credit

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

(a) Any obligation of [*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 UST System;

(e) Bodily Injury or Property Damage for [*Owner or Operator*] which 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 Part F, subsection 1.3 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 one hundred twenty (120) Days before the current expiration date, we notify [*Owner or Operator*] by Verifiable Service 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 one hundred twenty (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 this Part F, Section 3.6, Form F of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date shown immediately below.

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

_____

[Date]

_____

[Signature of Official of Issuing Institution]

_____

[Name of Person signing]

_____

[Title of Person signing]

_____

Authorized Representative of [name of Issuing Institution]

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"*].

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Section 3.7 **Form G: Trust Agreement**

FC: 76

DNREC Facility ID#:

Trust agreement, the "Agreement," entered into as of [*date*] by and between [*Owner or Operator*] a [*Name of State*] [*"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 Department of Natural Resources and Environmental Control (the Department), an agency of the State of Delaware, has established certain regulations applicable to the Grantor, requiring that an Owner or Operator of an Underground Storage Tank System shall provide assurance that funds will be available when needed for Corrective Action and third-party compensation for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of the UST System. The attached Part F, Section 3.18 Form R, Underground Storage Tank Schedule for Financial Assurance, lists the number of UST System(s) at each Facility and the name(s) and address(es) of the Facility(ies) where the UST System(s) are located that are covered by the 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. ESTABLISHMENT OF THE FUND

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of [the Department]. 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 Department'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 Department.

SECTION 3. PAYMENT FOR *CORRECTIVE ACTION AND/OR THIRD-PARTY LIABILITY CLAIMS*

The Trustee shall make payments from the Fund as the Department 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 Accidental Releases*] arising from operating the UST Systems 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 any 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 an UST System;

(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 Part F, subsection 1.3 of these Regulations. The Trustee shall reimburse the Grantor, or other Persons as specified by the Department, from the Fund for Corrective Action expenditures and/or third-party liability claims in such amounts as the Department shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Department specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

SECTION 4. PAYMENTS COMPRISING THE FUND

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

SECTION 5. 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:

A. Securities or other obligations of the Grantor, or any other Owner or Operator of the UST System(s), 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;

B. 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

C. The Trustee is authorized to hold cash awaiting investment or distribution un-invested for a reasonable time and without liability for the payment of interest thereon.

SECTION 6. 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 7. 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 8. 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 9. 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 10. 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 11. 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 Verified Service ten (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 8.0.

SECTION 12. 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 Department to the Trustee shall be in writing, signed by the Department, 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 Department 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 Department, except as provided for herein.

SECTION 13. 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 Department if the Grantor ceases to exist.

SECTION 14. IRREVOCABILITY AND TERMINATION

Subject to the right of the parties to amend this Agreement as provided in Section 13.0 of this Form above, 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 Department, 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 15. 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 Department 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 16. CHOICE OF LAW

This Agreement shall be administered, construed, and enforced according to the laws of the State of Delaware, or the Comptroller of the Currency in the case of National Association Banks.

SECTION 17. INTERPRETATION

As used in this Agreement, words in 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 thereof 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 Part F, Section 3.7, Form G of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date written above.

_____

[*Signature of Grantor*]

_____

[*Name of the Grantor*]

_____

_____

[*Title*]

Attest: _____

_____

[*Signature of Trustee*]

_____

[*Name of Trustee*]

_____

[*Title*]

[*Seal*]

Attest:_____

_____
[*Signature of Witness*]

_____
[*Name of Witness*]

_____
[*Title*]
[*Seal*]

The trust agreement shall be accompanied by a formal certification of acknowledgment similar to the following. State requirements may differ on the proper content of this acknowledgment.

State of _____
County of _____
On this _____, before me Personally came _____
[*Date*] [*Owner or Operator*]
to me known, who, being by me duly sworn, did depose and say that he/she resides at _____, and that she/he is [*Title*] of [*Corporation*] the corporation described in and which executed the above instrument; that he/she 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 his/her name thereto by like order.

[*Signature of Notary Public*] _____
[*Name of Notary Public*] _____

23 DE Reg. 581 (01/01/20)

Section 3.8 **Form H: Standby Trust Agreement**

FC: 76
DNREC Facility ID#:

Standby Trust agreement, the "Agreement," entered into as of [*date*] by and between [*Owner or Operator*] a [*Name of State*] [*"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 Department of Natural Resources and Environmental Control (Department), an agency of the State of Delaware, has established certain regulations applicable to the Grantor, requiring that an Owner or Operator of an Underground Storage Tank (UST) System shall provide assurance that funds will be available when needed for Corrective Action and third-party compensation for Bodily Injury and Property Damage caused by Accidental Releases arising from the operation of the UST. The attached Section 3.18, Form R, Underground Storage Tank Schedule for Financial Assurance lists the number of UST System(s) at each Facility and the name(s) and address(es) of the Facility(ies) where the UST System(s) are located that are covered by the standby 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 UST System(s) identified herein and is required to establish a standby trust fund able to accept payments from the instrument;

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 THE FUND

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Department. 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 Department'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 Department

SECTION 4.PAYMENT FOR *CORRECTIVE ACTION* AND/OR T*HIRD-PARTY LIABILITY CLAIMS*

The Trustee shall make payments from the Fund as the Department 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 Accidental Releases] arising from operating the UST Systems 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 any 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 an UST System;

(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 Part F, subsection 1.3 of these Regulations. The Trustee shall reimburse the Grantor, or other Persons as specified by the Department, from the Fund for Corrective Action expenditures and/or third-party liability claims in such amounts as the Department shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Department 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:

A. Securities or other obligations of the Grantor, or any other Owner or Operator of the UST System, 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;

B. 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

C. The Trustee is authorized to hold cash awaiting investment or distribution un-invested 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 Verified Service ten (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 9.0.

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 Department to the Trustee shall be in writing, signed by the Department, 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 Department 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 Department, 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 Department 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 of this Form above, 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 Department, 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 Department 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 Delaware, or the Comptroller of the Currency in the case of National Association Banks.

SECTION 18.INTERPRETATION

As used in this Agreement, words in 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 thereof 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 Part F, Section 3.8, Form H of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date written above.

[*Signature of Grantor*] _____

[*Name of the Grantor*] _____

[*Title*] _____

Attest: _____

[*Signature of Trustee*] _____

[*Name of Trustee*] _____

[*Title*] _____

[*Seal*]

Attest:_____
[*Signature of Witness*] _____
[*Name of Witness*] _____
[*Title*] _____

[*Seal*]

The standby trust agreement shall be accompanied by a formal certification of acknowledgment 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 he/she resides at [*address*], that she/he is [*Title*] of [*Corporation*]the corporation described in and which executed the above instrument; that he/she 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 his/her name thereto by like order.

[*Signature of Notary Public*] _____
[*Name of Notary Public*] _____

23 DE Reg. 581 (01/01/20)

Section 3.9 **Form I: Certification Of Valid Claim**

FC: 76
DNREC Facility ID#:

The undersigned, as principals and as legal representatives of [*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 or Operator*] Underground Storage Tank System should be paid in the amount of $[_____].

_____
[Signature of Owner or Operator]

_____
[Signature of Attorney for Owner or Operator]
(Notary)_____ Date _____

_____
[Signature of Claimant]

_____
[Signature of Attorney for Claimant]

(Notary)_____ Date _____

23 DE Reg. 581 (01/01/20)

Section 3.10 **Form J: Bond Rating Test General Purpose Local Government**

FC: 76

DNREC Facility ID#:

Letter from Chief Financial Officer

I am the Chief Financial Officer of [*insert: name and address of Local Government Owner or Operator, or Guarantor*]. This letter is in support of the use of the bond rating test 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" or "nonsudden Accidental Releases, or 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 System(s) (USTs).

UST System(s) at the following facilities are assured by this bond rating test:

Attach Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Local Government Bond Rating Test.

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [*name of Local Government Owner or Operator, or Guarantor*] to demonstrate financial responsibility are as follows: [complete table]

Issue Date

Maturity Date

Outstanding Amount

Bond Rating
Rating Agency [Moody's or Standard & Poor's]

The total outstanding obligation of [*insert amount*], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in Part F, Section 3.10, Form J of the Delaware *Regulations Governing Underground Storage Tank Systems* as such regulations were constituted on the date shown immediately below.

[*Signature*] _____
[*Name - Print*] _____
[*Title*] _____
[*Date*] _____

23 DE Reg. 581 (01/01/20)

Section 3.11 Form K: Bond Rating Test/local Government Other

FC: 76
DNREC Facility ID#:

Letter from Chief Financial Officer

I am the Chief Financial Officer of [*insert: name and address of Local Government Owner or Operator, or Guarantor*]. This letter is in support of the use of the bond rating test 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" or "nonsudden Accidental Releases, or 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 System(s) (USTs). This Local Government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

UST System(s) at the following facilities are assured by this bond rating test:

Attach Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Local Government Bond Rating Test.

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [*name of Local Government Owner or Operator, or Guarantor*] to demonstrate financial responsibility are as follows: [*complete table*]

Issue Date
Maturity Date
Outstanding Amount
Bond Rating
Rating Agency [Moody's or Standard & Poor's]

The total outstanding obligation of [*insert amount*], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (*Moody's Baa or Standard & Poor's BBB*) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in Section 3.11, Form K of the Delaware *Regulations Governing Underground Storage Tank Systems* as such regulations were constituted on the date shown immediately below.

[*Signature*] _____
[*Name*] _____
[*Title*] _____
[*Date*] _____

23 DE Reg. 581 (01/01/20)

Section 3.12 **Form L: Local Government Financial Test**

FC: 76
DNREC Facility ID#:

LETTER FROM CHIEF FINANCIAL OFFICER

I am the Chief Financial Officer of [*insert: name and address of the Owner or Operator*]. This letter is in support of the use of the Local Government financial test 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" or "nonsudden Accidental Releases, or 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 System(s) (USTs)].

UST System(s) at the following facilities are assured by this financial test:

[Attach Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Local Government Financial Test.]

This Owner or Operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard & Poor's rating of AAA, AA, A, or BBB; if rated by both

firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard & Poor's rating of AAA, AA, A, or BBB.

WORKSHEET FOR MUNICIPAL FINANCIAL TEST

PART I: BASIC INFORMATION

1. Total Revenues
a. Revenues (dollars)
Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.
b. Subtract interfund transfers (dollars)
c. Total Revenues (dollars)

2. Total Expenditures
a. Expenditures (dollars)
Value consists of the sum of general fund operating and non-operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.
b. Subtract interfund transfers (dollars)
c. Total Expenditures (dollars)

3. Local Revenues
a. Total Revenues (from 1c) (dollars)
b. Subtract total intergovernmental transfers (dollars)
c. Local Revenues (dollars)

4. Debt Service
a. Interest and fiscal charges (dollars)
b. Add debt retirement (dollars)
c. Total Debt Service (dollars)

5. Total Funds (dollars)
(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)

6. Population (Persons)

PART II: APPLICATION OF TEST

7. Total Revenues to Population
a. Total Revenues (from 1c)
b. Population (from 6)
c. Divide 7a by 7b
d. Subtract 417
e. Divide by 5,212
f. Multiply by 4.095

8. Total Expenses to Population
a. Total Expenses (from 2c)
b. Population (from 6)
c. Divide 8a by 8b
d. Subtract 524
e. Divide by 5,401
f. Multiply by 4.095

9. Local Revenues to Total Revenues
a. Local Revenues (from 3c)
b. Total Revenues (from 1c)
c. Divide 9a by 9b
d. Subtract .695
e. Divide by .205
f. Multiply by 2.840

10. Debt Service to Population
a. Debt Service (from 4c)
b. Population (from 6)
c. Divide 10a by 10b
d. Subtract 51
e. Divide by 1,038
f. Multiply by -1.866

11. Debt Service to Total Revenues
a. Debt Service (from 4c)
b. Total Revenues (from 1c)
c. Divide 11a by 11b
d. Subtract .068
e. Divide by .259
f. Multiply by -3.533

12. Total Revenues to Total Expenses
a. Total Revenues (from 1c)
b. Total Expenses (from 2c)
c. Divide 12a by 12b
d. Subtract .910
e. Divide by .899
f. Multiply by 3.458

13. Funds Balance to Total Revenues
a. Total Funds (from 5)
b. Total Revenues (from 1c)
c. Divide 13a by 13b
d. Subtract .89
e. Divide by 9.156
f. Multiply by 3.270

14. Funds Balance to Total Expenses

a. Total Funds (from 5)
b. Total Expenses (from 2c)
c. Divide 14a by 14b
d. Subtract .866
e. Divide by 6.409
f. Multiply by 3.270

15. Total Funds to Population
a. Total Funds (from 5)
b. Population (from 6)
c. Divide 15a by 15b
d. Subtract 270
e. Divide by 4,548
f. Multiply by 1.866

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in Part F, Section 3.12, Form L of the Delaware *Regulations Governing Underground Storage Tank Systems* as such regulations were constituted on the date shown immediately below.

[*Signature*] _____

[*Name*] _____

[*Title*] _____

[*Date*] _____

23 DE Reg. 581 (01/01/20)

Section 3.13 Form M: Local Government Guarantee With Standby Trust Made By A State

FC: 76
DNREC Facility ID#:

Guarantee made this [*date*] by [*name of State*], herein referred to as Guarantor, to Department of Natural Resources and Environmental Control and to any and all third parties, and obliges, on behalf of [*Local Government Owner or Operator*].

Recitals:

(1) Guarantor is a State.

(2) [*Local Government Owner or Operator*] owns or operates the following Underground Storage Tank System(s) (USTs) covered by this guarantee:

[*Attach Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Local Government Guarantee with Standby Trust Made by a State.] If more than one instrument is used to assure different UST System(s) at any one Facility, for each UST System covered by this instrument, list the UST System identification number provided in the notification submitted pursuant to Part A of Delaware's Regulations Governing Underground Storage Tank Systems, and the name and address of the Facility.*]

This guarantee satisfies Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* requirements for 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 UST Systems or locations, indicate the type of coverage applicable to each UST System or location)] arising from operating the above-identified UST System(s) in the amount of [*insert dollar amount*] per Occurrence and [*insert dollar amount*] Annual Aggregate.

(3) Guarantor guarantees to the Department and to any and all third parties that:

In the event that [*Local Government Owner or Operator*] fails to provide alternative coverage within sixty (60) Days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a Release has occurred at an UST System covered by this guarantee, the Guarantor, upon instructions from the Department shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*Local Government Owner or Operator*] has failed to perform corrective action for Releases arising out of the operation of the above-identified UST Systems in accordance with Part E of the Delaware *Regulations Governing Underground Storage Tank Systems* the Guarantor upon written instructions from the Department shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Governing Underground Storage Tank Systems* 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 UST System(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 Department, shall fund a standby trust in accordance with the provisions of Part F, subsection 2.15 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [*Owner or Operator*] by Verifiable Service of a voluntary or involuntary proceeding under Title 11 {Bankruptcy}, U.S. Code naming Guarantor as debtor, within ten (10) Days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [*Owner or Operator*] pursuant to the Delaware *Regulations Governing Underground Storage Tank Systems*.

(6) Guarantor agrees to remain bound under this guarantee for so long as [*Local Government Owner or Operator*] must comply with the applicable financial responsibility requirements of Part F for the above identified UST System(s), except that Guarantor may cancel this guarantee by sending notice by Verifiable Service to [*Owner or Operator*], such cancellation to become effective no earlier than one hundred twenty 120 Days after receipt of such notice by [*Owner or Operator*], as evidenced by the return receipt.

(7) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [*Local Government 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: Local Government Owner or Operator*] arising from, and in the course of, employment by [*insert: Local Government 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: Local Government Owner or Operator*] that is not the direct result of a Release from an UST System;

(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 Part F, subsection 1.3.

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [*Local Government Owner or Operator*],

I hereby certify that the wording of this guarantee is identical to the wording specified in Section 3.13, Form M of the Delaware *Regulations Governing Underground Storage Tank Systems* 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:

23 DE Reg. 581 (01/01/20)

Section 3.14 Form N: Local Government Guarantee With Standby Trust Made By A Local Government

FC: 76
DNREC Facility ID#:

Guarantee made this [*date*] by [*name of guaranteeing entity*], a Local Government organized under the laws of [*name of State*], herein referred to as Guarantor, to the Department and to any and all third parties, and obliges, on behalf of [*Local Government Owner or Operator*].

Recitals

(1) Guarantor meets or exceeds [*select one: the Local Government bond rating test requirements of Part F, subsection 2.8 of the Delaware Regulations Governing Underground Storage Tank Systems, the Local Government financial test requirements of Part F, subsection 2.9, of the Delaware Regulations Governing Underground Storage Tank Systems or the Local Government fund under Part F, subsection 2.11 of the Delaware Regulations Governing Underground Storage Tank Systems*].

(2) [*Local Government Owner or Operator*] owns or operates the following Underground Storage Tank System(s) (USTs) covered by this guarantee:

Attach Section 3.18, Form R Underground Storage Tank Schedule, of the Delaware Regulations Governing Underground Storage Tank Systems, listing each UST System assured by this Local Government Guarantee.

This guarantee satisfies Part F requirements for 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 UST Systems or locations, indicate the type of coverage applicable to each UST System or location)*] arising from operating the above-identified UST System(s) in the amount of [*insert dollar amount*] per Occurrence and [*insert: dollar amount*] Annual Aggregate.

(3) Incident to our Substantial Governmental Relationship with [*Local Government Owner or Operator*], Guarantor guarantees to Department and to any and all third parties that:

In the event that [*Local Government Owner or Operator*] fails to provide alternative coverage within sixty (60) Days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a Release has occurred at an UST System covered by this guarantee, the Guarantor, upon instructions from the Department shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Governing Underground Storage Tank Systems*, in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*Local Government Owner or Operator*] has failed to perform Corrective Action for Releases arising out of the operation of the above-identified UST System(s) in accordance with Part E of these Regulations, the Guarantor upon written instructions from the Department shall fund a standby trust fund in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Government Underground Storage Tank Systems* 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 UST System(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 Department, shall fund a standby trust in accordance with the provisions of Part F, subsection 2.15 of the Delaware *Regulations Governing Underground Storage Tank Systems* 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 or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), Guarantor shall send within one hundred twenty (120) Days of such failure, by Verifiable Service, notice to [Local Government Owner or Operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [*Owner or Operator*] by Verifiable Service of a voluntary or involuntary proceeding under Title 11 {Bankruptcy}, U.S. Code naming Guarantor as debtor, within ten (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 the Delaware *Regulations Governing Underground Storage Tank Systems*.

(7) Guarantor agrees to remain bound under this guarantee for so long as [*Local Government Owner or Operator*] must comply with the applicable financial responsibility requirements of Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* for the above identified UST System(s), except that Guarantor may cancel this guarantee by sending notice by Verifiable Service to [*Owner or Operator*], such cancellation to become effective no earlier than one hundred twenty (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 [*Local Government 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: Local Government Owner or Operator*] arising from, and in the course of, employment by [*insert: Local Government 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: Local Government Owner or Operator*] that is not the direct result of a Release from a UST System;

(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 Part F, Section 1.0 of the Delaware *Regulations Governing Underground Storage Tank System*s.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [*Local Government Owner or Operator*].

I hereby certify that the wording of this guarantee is identical to the wording specified in Part F, Section 3.14, Form N of the Delaware *Regulations Governing Underground Storage Tank Systems* 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:

23 DE Reg. 581 (01/01/20)

Form O: Local Government Guarantee Without Standby Trust Made By A State

FC: 76
DNREC Facility ID#:

Guarantee made this [*date*] by [*name of State*], herein referred to as Guarantor, to the Department and to any and all third parties, and obliges, on behalf of [*Local Government Owner or Operator*].

Recitals

(1) Guarantor is a State.

(2) [*Local Government Owner or Operator*] owns or operates the following Underground Storage Tank System(s) (USTs) covered by this guarantee:

Attach Delaware Regulations Governing Underground Storage Tank Systems, Section 3.18, Form R, Underground Storage Tank Schedule, listing each UST System assured by this Local Government Guarantee Without Standby Trust

Made by a State

This guarantee satisfies Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* requirements for 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 UST Systems or locations, indicate the type of coverage applicable to each UST System or location)*] arising from operating the above-identified UST System(s) in the amount of [*insert: dollar amount*] per Occurrence and [*insert: dollar amount*] Annual Aggregate.

(3) Guarantor guarantees to the Department and to any and all third parties and obliges that:

In the event that [*Local Government Owner or Operator*] fails to provide alternative coverage within sixty (60) Days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a Release has occurred at an UST System covered by this guarantee, the Guarantor, upon written instructions from the Department shall make funds available to pay for Corrective Actions and compensate third parties for Bodily Injury and Property Damage in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*Local Government Owner or Operator*] has failed to perform Corrective Action for Releases arising out of the operation of the above-identified UST-System(s) in accordance with Part E of the Delaware *Regulations Governing Underground Storage Tank Systems*, the Guarantor upon written instructions from the Department shall make funds available to pay for Corrective Actions 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 UST System(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 Department, shall make funds available to compensate third parties for Bodily Injury and Property Damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [*Owner or Operator*] by Verified Service of a voluntary or involuntary proceeding under Title 11 {Bankruptcy}, U.S. Code naming Guarantor as debtor, within ten (10) Days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [*Owner or Operator*] pursuant to the Delaware *Regulations Governing Underground Storage Tank Systems*.

(6) Guarantor agrees to remain bound under this guarantee for so long as [*Local Government Owner or Operator*] must comply with the applicable financial responsibility requirements of Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* for the above identified UST Systems, except that Guarantor may cancel this guarantee by sending notice by Verified Service to [*Owner or Operator*], such cancellation to become effective no earlier than one hundred twenty (120) Days after receipt of such notice by [*Owner or Operator*], as evidenced by the return receipt. If notified of a probable Release, the Guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the Release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future Releases.

(7) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [*Local Government 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 Local Government Owner or Operator*] arising from, and in the course of, employment by [*insert: Local Government 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: Local Government Owner or Operator*] that is not the direct result of a Release from an UST System;

(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 Part F, subsection 1.3 of the Delaware *Regulations Governing Underground Storage Tank Systems.*

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [*Local Government Owner or Operator*].

I hereby certify that the wording of this guarantee is identical to the wording specified in Section 3.15, Form O of the Delaware *Regulations Governing Underground Storage Tank Systems* 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:

23 DE Reg. 581 (01/01/20)

Section 3.16 Form P: Local Government Guarantee Without Standby Trust Made By A Local Government

FC: 76
DNREC Facility ID#:

Guarantee made this [*date*] by [*name of guaranteeing entity*], a Local Government organized under the laws of [*name of State*], herein referred to as Guarantor, to the Department and to any and all third parties, and obliges, on behalf of [*Local Government Owner or Operator*].

Recitals

(1) Guarantor meets or exceeds [*select one: the Local Government bond rating test requirements of Part F, subsection 2.8 of the Delaware Regulations Governing Underground Storage Tank Systems*, the *Local Government financial test requirements of Part F, subsection 2.9 of the Delaware Regulations Governing Underground Storage Tank Systems*, *the Local Government fund under Part F, subsection 2.11 of the Delaware Regulations Governing Underground Storage Tank Systems*.]

(2) [*Local Government Owner or Operator*] owns or operates the following Underground Storage Tank System(s) covered by this guarantee:

Attach *Section 3.18, Form* R, *Underground Storage* Tank Schedule*, of the Delaware Regulations Governing Underground Storage Tank Systems for Financial Assurance listing all UST Systems assured by this Local Government Guarantee*.

This guarantee satisfies Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* requirements for 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 UST Systems or locations, indicate the type of coverage applicable to each UST System or location*] arising from operating the above-identified UST System(s) in the amount of [*insert: dollar amount*] per Occurrence and [*insert: dollar amount*] Annual Aggregate.

(3) Incident to our Substantial Governmental Relationship with [*Local Government Owner or Operator*], Guarantor guarantees to the Department and to any and all third parties and obliges that:

In the event that [*Local Government Owner or Operator*] fails to provide alternative coverage within sixty (60) Days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a Release has occurred at an UST System covered by this guarantee, the Guarantor, upon written instructions from the Department shall make funds available to pay for Corrective Actions and compensate third parties for Bodily Injury and Property Damage in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*Local Government Owner or Operator*] has failed to perform Corrective Action for Releases arising out of the operation of the above-identified UST System(s) in accordance with Part E of the Delaware *Regulations Governing Underground Storage Tank Systems*, the Guarantor upon written instructions from the Department shall make funds available to pay for Corrective Actions 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 UST Systems, 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 Department, shall make funds available to compensate third parties for Bodily Injury and Property Damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the Guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), Guarantor shall send within one hundred twenty (120) Days of such failure, by Verifiable Service, notice to [*Local Government Owner or Operator*], as evidenced by the return receipt.

(5) Guarantor agrees to notify [*Owner or Operator*] by Verifiable Service of a voluntary or involuntary proceeding under Title 11 {Bankruptcy}, U.S. Code naming Guarantor as debtor, within ten (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 these Regulations.

(7) Guarantor agrees to remain bound under this guarantee for so long as [*Local Government Owner or Operator*] must comply with the applicable financial responsibility requirements of Part F of the Delaware *Regulations Governing Underground Storage Tank Systems* for the above identified UST Systems, except that Guarantor may cancel this guarantee by sending notice by Verifiable Service to [*Owner or Operator*], such cancellation to become effective no earlier than one hundred twenty (120) Days after receipt of such notice by [*Owner or Operator*], as evidenced by the return receipt. If notified of a probable Release, the Guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the Release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future Releases.

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

(a) Any obligation of [*Local Government 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: Local Government Owner or Operator*] arising from, and in the course of, employment by [*insert: Local Government Owner or Operato*r];

(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: Local Government Owner or Operator*] that is not the direct result of a Release from an UST System;

(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 Part F of the Delaware *Regulations Governing Underground Storage Tank Systems*.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [*Local Government Owner or Operator*],

I hereby certify that the wording of this guarantee is identical to the wording specified in Part F, Section 3.16, Form P of the Delaware *Regulations Governing Underground Storage Tank Systems* 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:

23 DE Reg. 581 (01/01/20)

Section 3.17 Form Q: Local Government Fund Mechanism

FC: 76
DNREC Facility ID#:

Letter from Chief Financial Officer

I am the Chief Financial Officer of [*insert: name and address of Local Government Owner or Operator, or Guarantor*]. This letter is in support of the use of the Local Government fund mechanism 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, or 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 System(s) (USTs).

UST Systems at the following facilities are assured by this Local Government fund mechanism:

Attach Section 3.18, Form R, Underground Storage Tank Schedule of the Delaware Regulations Governing Underground Storage Tank Systems for Financial Assurance listing all UST Systems assured by this Local Government Fund.

[Insert: "The Local Government fund is funded for the full amount of coverage required under Part F, subsection 1.3 of the Delaware Regulations Governing Underground Storage Tank Systems, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage." or "The Local Government fund is funded for five times the full amount of coverage required under Part F, subsection 1.3 of the Delaware Regulations Governing Underground Storage Tank Systems, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage," or "A payment is made to the fund once every year for seven (7) years until the fund is fully-funded and [name of Local Government Owner or Operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven (7) years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the Local Government's debt beyond the legal debt ceilings established by the relevant State laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the Local Government fund are as follows:

Amount in Fund (market value of fund of close of last fiscal year): _____

[If fund balance is incrementally funded as specified in subsection 2.11.1.3 of the Delaware *Regulations Governing Underground Storage Tank Systems*, insert:

Amount added to fund in the most recently completed fiscal year: _____

Number of years remaining in the pay-in period: _____]

A copy of the State constitutional provision, or Local Government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in Part F, Form Q of the Delaware *Regulations Governing Underground Storage Tank Systems* as such Regulations were constituted on the date shown immediately below.

[*Signature*]
[*Name*]
[*Title*]
[*Date*]

23 DE Reg. 581 (01/01/20)

Section 3.18 Form R: Underground Storage Tank Schedule For Financial Assurance

FC: 76
DNREC Facility ID#:
DNREC UST Facility ID# _____-_____
Type of Financial Assurance Mechanism _____

Is this mechanism being used in combination with any other FR mechanism? Yes* No

*If "Yes" note additional FR mechanism _____

Facility Name

Facility Street Address

Facility City Facility Zip

Owner Name

Owner Street Address

Owner City Owner State Owner Zip

_____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

_____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

_____

Tank ID# _____ (from UST registration form)

Tank capacity _____

Regulated substance stored _____

_____

[Signature of Official of Issuing Document]

_____

[Name of Person signing]

_____

[Title of Person signing]

_____

Authorized Representative of [name of Organization issuing Document]

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

Part G: Requirements For Underground Storage Tank System Contractor Certification

1.0 General Requirements for Contractor Certification

1.1 General Provisions

1.1.1 Certification is required for business entities contracting for, or engaged in the following UST System activities:

1.1.1.1 Installation

1.1.1.2 Retrofit

1.1.1.3 Removal or Closure in Place

1.1.1.4 Lining systems

1.1.2 Certification is required for individuals supervising the following UST System related activities:

1.1.2.1 Installation

1.1.2.2 Retrofit

1.1.2.3 Removal or Closure in Place

1.1.2.4 Lining systems

1.1.3 Upon completion of all requirements, the Department shall issue a certification to business entities and a certified UST contractor card to individuals, endorsed for the appropriate UST System activities they are certified to perform.

1.1.4 Proof of certification shall be provided immediately upon request by representatives from the Department while individuals are performing UST System activities requiring certification. Proof of certification shall consist of a valid certified UST contractor card issued by the Department certifying that contractor

certification requirements have been met. All UST System activities requiring certification shall immediately cease if proof of certification is not provided.

1.1.5 Any individual or business entity that is certified shall notify the Department of any name or address change within thirty (30) Days of such change.

1.1.6 Any individual or business entity who is certified shall notify the Department of any pending litigation against them involving any type of construction or any environmental or regulatory compliance, within ten (10) Days of receipt of notice of that litigation.

1.2 Qualification Requirements for Certification

1.2.1 Business Entity Certification

1.2.1.1 A business entity may apply for certification for one or more UST System activities.

1.2.1.2 All business entities engaged in installation, Retrofit, Removal or Closure in Place of UST Systems shall meet the following requirements for certification:

1.2.1.2.1 Submit to the Department a complete application form and attach appropriate documentation of experience and training with the required application fee; and

1.2.1.2.2 Provide proof of general liability insurance in the amount of $1,000,000 and Contractor's Pollution Liability Insurance in the amount of $250,000; and

1.2.1.2.3 Employ individuals who meet the requirements of Part G, subsection 1.2.2; and

1.2.1.2.4 Provide proof of current Delaware Business License.

1.2.2 Individual On-Site Certification

1.2.2.1 Each site where UST System installation, Retrofit, Removal or Closure in Place occurs shall have a minimum of one individual, certified for the UST System activity to be performed, present at all times while activity is occurring. This individual shall be a permanent employee of the business firm performing the UST System activity and the business entity shall be certified for the UST System activity being performed.

1.2.2.2 Individuals engaged in installation, Retrofit, Removal or Closure In Place of UST Systems shall meet the following requirements for certification:

1.2.2.2.1 Submit to the Department a complete application form with the required application fee; and

1.2.2.2.2 Submit proof of applicable training or experience for the type of activity for which the individual is seeking certification; and

1.2.2.2.3 Receive a score of eighty percent (80%) or higher on an examination to be given by the Department for each activity for which the individual is seeking certification.

1.2.2.3 In the event that an applicant scores less than eighty percent (80%) on the examination, he or she may request to sit for the examination at the next scheduled examination or within thirty (30) Days, whichever is less.

1.2.2.4 An applicant who has not scored eighty percent (80%) or higher on the examination after three (3) attempts shall wait six (6) months before submitting a new application and retesting.

1.3 Standards of Performance for Certified Business Entities and Individuals

1.3.1 All certified individuals and business entities are required to meet the following standards of performance:

1.3.1.1 All UST System activities performed as a certified contractor shall be performed according to accepted engineering practices and procedures and applicable OSHA safety practices contained in 29 **CFR** 1910.

1.3.1.2 All required notifications and applications shall be submitted to the Department as specified in the Regulations.

1.3.1.3 Any deviation from standard practices and procedures shall be approved in writing by the Department.

1.3.1.4 Installation of UST Systems and all associated equipment shall be in accordance with the conditions in the Department's approval letter.

1.3.1.5 Any contractor installing equipment requiring a manufacturer's certification shall have a current manufacturer's certification for that product and shall provide it immediately upon request by representatives from the Department.

1.3.1.6 Removal or Closure In Place of an UST System shall be performed in accordance with the procedures detailed in the current version of API 1604, API 2015 and PEI 1700.

1.3.1.7 Certified contractors shall follow the Release reporting requirements in Part E of these Regulations. When a reportable Release is noted, the notification may be submitted jointly by the Owner, Operator, and certified contractor.

1.3.1.8 All paperwork resulting from performing certified UST System activities shall be submitted to the Department within sixty (60) Days of the completion of UST System activities at a site.

1.3.1.9 Copies of all paperwork generated as a result of certified UST System activities performed shall be retained by the certified contractor for a minimum of three (3) years.

1.3.2 Certification shall be valid for a period of two (2) years from the date of issuance.

1.4 Application Requirements for Certification

1.4.1 All applications shall be submitted in writing on forms supplied by the Department. Copies of such forms may be obtained from DNREC the Department.

1.4.2 Each application shall contain a verified statement by the applicant for certification, or its duly authorized representative, that they and any individual employed by the applicant on any UST System installation, Retrofit, Removal or Closure In Place, shall be provided with a copy of these Regulations and shall be required to comply with all applicable parts of these Regulations.

1.4.3 The completed application shall be submitted to the Department and shall be accompanied by a non-refundable fee as specified by the Department.

1.4.4 The Department, upon review of the certification application, shall notify the applicant in writing, no later than thirty (30) Days from receipt, of the need for further information, denial for cause, or approval of the applicant to sit for an examination provided by the Department. Denial for cause of the certification application shall be explained by the Department at the time of denial.

1.4.5 A certified contractor who seeks renewal of their certification shall submit a notice for renewal at least sixty (60) Days prior to its expiration. Upon receipt of such notice, the Department shall furnish a renewal application to the certified contractor.

1.4.5.1 The certified contractor shall submit the completed form to the Department at least thirty (30) Days prior to expiration of the certification.

1.4.5.2 The Department shall notify the applicant in writing no later than thirty (30) Days from receipt of the certification application of the issuance or denial of the certification, or the need for further information in order to process the application. Denial of certification for cause shall be explained by the Department at the time of denial. Each reapplication requires a new application fee.

1.4.5.3 In the event the certified contractor fails to renew the certification before the expiration date, the certification shall expire. If certification has been expired for two (2) years or more, the contractor shall apply as an initial applicant.

1.4.6 Any applicant denied for cause may appeal in writing within ten (10) Days of receipt of denial. Each reapplication requires a new application fee.

1.4.7 An applicant whose certification application is denied for cause may not reapply for certification for two (2) years from the date of denial.

1.5 Denial of Initial Certification or Renewal Certification Application

1.5.1 The Department may deny certification if it determines that the applicant has not demonstrated the ability to comply fully with applicable requirements or a standard of performance. The Department may deny any request for certification for cause including:

1.5.1.1 Fraudulently or deceptively attempting to obtain a certification.

1.5.1.2 Failure at any time to meet the qualifications for certification or failure to comply with any applicable part of these Regulations.

1.5.1.3 Denial or revocation of certification or decertification in any other state. The Department shall evaluate each state's regulations and the reason for denial or decertification on an individual basis.

1.5.1.4 Failure to submit a complete application.

1.5.1.5 If any information exists to indicate that the business entity or individual seeking certification has failed to meet obligations under a contract or has failed to safely perform any UST System activity.

1.5.1.6 Has demonstrated repeated deficiencies in performing UST System work.

1.5.1.7 A court has found that the applicant has violated any law for the protection of the environment, or that the applicant breached any duty owed in the performance of UST System related activities.

1.6 Suspension or Revocation of Certification

1.6.1 The Department may, for cause or for violation of applicable Department Regulations, suspend and or revoke any certification issued under this Regulation. Further, in any circumstances where any certified contractor has demonstrated the inability or reluctance to follow safety practices or project specifications, or has violated a standard of performance, the certification may be suspended or revoked.

1.6.2 Upon notification of suspension or revocation of the certification, the certified contractor shall surrender their proof of certification to the Department within the time period specified in the notice.

1.6.3 A contractor whose certification has been suspended or revoked shall not bid, contract, subcontract or directly perform any activity involving UST Systems within the State of Delaware during the period of suspension or revocation.

1.6.4 Any officer, director, partner, or Owner with a Controlling Interest of any business entity whose certification has been suspended or revoked shall not serve as an officer, director, or partner, or have a Controlling Interest, in another business entity certified or applying for certification in Delaware during the period of suspension or revocation. Violation of the foregoing may result in suspension or revocation of the latter business entity's certification.

1.6.5 No contractor whose certification was suspended or revoked shall participate in another business entity as a shareholder, officer, director, partner, or profit-sharing employee or investor during the period of suspension or revocation. Violation of the foregoing may result in suspension or revocation of all certifications involved.

1.6.6 A contractor whose certification has been suspended or revoked for cause by any Federal, state or Local Government entity, may have their Delaware contractor certification immediately suspended or revoked.

1.6.7 A contractor who has been barred from bidding on UST System projects for any Federal, state, or Local Government project, may have their Delaware contractor certification immediately suspended or revoked.

1.6.8 In addition to the above, causes for suspension or revocation include the following:

1.6.8.1 Providing false information to the Department.

1.6.8.2 Shows evidence of a mental or physical impairment including use of alcohol or drugs, as determined by the Department, which may interfere with the safe performance of UST System work.

1.6.8.3 Knowingly or recklessly disregarding safe work practices while performing UST System work.

1.6.8.4 Failure to comply with any applicable regulations or procedures administered by the Department.

1.6.8.5 Failure to meet the standards of performance in Part G, subsection 1.3.

1.6.8.6 Failure to comply with the terms of a Notice of Violation or Secretarial Order issued by the Department.

1.6.8.7 Direct violation of applicable Department, Occupational Safety & Health Administration (OSHA) or Environmental Protection Agency (EPA) regulations.

1.6.8.8 Failure to comply with contract specifications.

1.6.8.9 Any acts of fraud or conviction of an act of fraud.

1.6.8.10 When any Person claims to have been damaged or injured by the gross negligence, incompetence, fraud, dishonest dealing or misconduct in the practice of contracting on the part of any contractor certified by the Department, the Department may revoke the certification under which the certified contractor is operating at the time of the aforementioned violations.

1.6.8.11 Any action deemed by the Department as worthy of suspension or revocation.

1.6.9 If the Department acts to suspend or revoke any certification, the Department shall notify the certified contractor in writing, by Verifiable Service, of the reason for suspension or revocation. The notice of suspension or revocation will provide necessary information concerning the right to appeal.

1.6.10 Any contractor whose certification has been suspended or revoked may appeal to the Department in writing within ten (10) Days of receipt of suspension or revocation.

1.6.11 A contractor whose certification is revoked may not reapply for certification for two (2) years from the date of revocation.

1.7 Appeals

1.7.1 Appeal Procedures

1.7.1.1 Any business entity or individual who is initially denied certification, denied renewal of certification, or whose certification is suspended or revoked may request an evidentiary hearing before an impartial hearing officer.

1.7.1.2 This request shall be made in writing to the Department within ten (10) Days of the initial notification of denial, suspension or revocation.

1.7.1.3 The evidentiary hearing shall be scheduled by the Department within fourteen (14) Days of a written request.

1.7.2 Evidentiary Hearing Procedures

1.7.2.1 The Hearing shall be audio recorded by the Hearing Officer but no transcript is necessary. The audio recording shall be kept for at least ninety (90) Days from the date that the Department

makes its final decision in the matter. Respondents are entitled to have legal counsel present. Witnesses are sworn before testifying. The Hearing Officer decides all objections to evidence.

1.7.2.2 The Hearing shall proceed in the following order:

1.7.2.2.1 A brief opening statement is made by the prosecution, then the Respondent, if they so choose.

1.7.2.2.2 The prosecution presents witnesses. After the prosecution is finished with the direct examination of a witness, the Respondent may cross-examine the witness.

1.7.2.2.3 The Respondent presents witnesses. The Respondent may testify. The Respondent and any witnesses for the respondent are subject to cross-examination by the prosecution.

1.7.2.2.4 Closing statements are made by the prosecution and then the Respondent.

1.7.3 The Hearing Officer's Written Report and Decision

1.7.3.1 Introductory Information

1.7.3.1.1 Introductory information in the Report and Recommendation includes the date, time and place of the hearing, the Persons present and their capacities, and the witnesses who testified.

1.7.3.2 Findings of Fact

1.7.3.2.1 The Hearing Officer shall make findings of fact based on the sworn testimony and exhibits entered into evidence at the hearing. Conflicting testimony is noted. If the Hearing Officer chooses to place more weight and credibility on certain testimony in evidence, the reasons are given. If critical testimony is uncontroverted by the opposing party, the Hearing Officer should say so. Evidence that is excluded or given less weight because of objection should be so noted. Exhibits relevant to the decision should be referenced and attached.

1.7.3.3 Conclusions of Law

1.7.3.3.1 The Hearing Officer should explicitly state: "I make the following conclusions of law." This section applies facts to the applicable statute or law.

1.7.3.4 Decision

1.7.3.4.1 The Hearing Officer shall then make a decision based on the Findings of Fact and Conclusions of Law.

1.7.3.5 Procedures

1.7.3.5.1 The written Report and Decision shall be sent to the Respondent by Verifiable Service. The cover letter by the Hearing Officer shall inform the Respondent of the decision and shall state that the Respondent has the right to appeal the decision to the Environmental Appeals Board at that time.

1.7.3.6 Burden of Proof

1.7.3.6.1 The Hearing Officer's Report and Recommendation should explicitly state that the Hearing Officer finds the prosecution proved, or did not prove, its case by a preponderance of evidence.

1.7.3.6.2 Any applicant whose denial, suspension or revocation is upheld by the Hearing Officer may appeal to the Environmental Appeals Board. Appeals to the Environmental Appeals Board shall be in writing and shall be within ten (10) Days of receiving notice of denial, suspension or revocation from the Hearing Officer.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

Part H Requirements for Installation, Operation and Maintenance of Field- Constructed Underground Storage Tank Systems

1.0 General Requirements

1.1 Owners and Operators shall comply with the requirements of Part H for UST systems with Field-Constructed Tanks as follows:

1.1.1 For UST systems installed on or before January 11, 2020, the requirements are effective according to the following schedule:

Requirement	Effective date
Upgrading UST systems; general operating requirements; and Operator training	No later than October 13, 2021
Release Detection	No later than October 13, 2021
Closure; financial responsibility and notification (except as provided in Part H, subsection 1.1.2.1)	In effect after January 11, 2020
Release reporting, response, and investigation	In effect

1.1.2 For UST systems installed after January 11, 2020, the requirements shall apply at the time of installation

1.1.2.1 After January 11, 2020, all Owners of previously deferred UST systems shall submit a one-time notice of UST system existence to the Department, in accordance with Part A, Section 4.0. Owners and Operators of UST systems in use as of January 11, 2020 shall demonstrate financial responsibility in accordance with Part F of these Regulations at the time of submission of the notification form.

1.1.2.2 Except as provided in Part H, Section 2.0, Owners and Operators shall comply with all applicable requirements of Parts A, B, C, D, E, F and G of these Regulations.

1.1.2.3 In addition to the industry referenced standards listed in Part A, Section 3.0, Owners and Operators may use military construction criteria, including Unified Facilities Criteria (UFC) 3–460–01, Petroleum Fuel Facilities, when designing, constructing, and installing Airport Hydrant Fuel Systems and UST systems with Field-Constructed Tanks.

2.0 Additions, exceptions, and alternatives for UST systems with Field-Constructed Tanks

2.1 Exception to Piping Secondary Containment Requirements

2.1.1 Owners and Operators may use single walled Piping when installing or replacing Piping associated with UST systems with Field-Constructed Tanks greater than 50,000 gallons. Piping associated with UST systems with Field-Constructed Tanks less than or equal to 50,000 gallons shall meet the Secondary Containment requirement in Part B, subsection 1.4 when installed or replaced.

2.2 Upgrade Requirements

2.2.1 Not later than October 13, 2021, UST systems with Field-Constructed Tanks where installation commenced on or before January 11, 2020 shall meet the following requirements or be Removed or Closed In Place in accordance with the requirements of Part B, Section 4.0.

2.2.2 UST system components in contact with the ground that routinely contain Regulated Substances shall meet the following:

2.2.2.1 Except as provided in Part H, subsection 2.1, the new UST system performance standards in Part B, subsections 1.6, 1.7, 1.8, 1.14, 1.15, 1.16 and 1.24.

2.2.3 To prevent spilling and overfilling associated with product transfer to the UST system, all UST systems with Field-Constructed Tanks shall comply with new UST system spill and overfill prevention equipment requirements specified in Part B, subsections 1.21 and 1.22.

2.3 Routine Inspection Requirements

2.3.1 Owners and Operators shall conduct routine inspection requirements in accordance with Part B, subsection 1.31, as applicable, and keep documentation of the inspection in accordance with Part B, subsection 1.31.2.

2.4 Release Detection Requirements

2.4.1 Owners and Operators of UST systems with Field-Constructed Tanks shall begin meeting the Release Detection requirements described in Part H, subsection 2.4 not later than October 13, 2021.

2.4.1.1 Owners and Operators of Field-Constructed Tanks with a capacity less than or equal to 50,000 gallons shall meet the Release Detection requirements in Part B, subsection 1.9 of these Regulations. Owners and Operators of Field-Constructed Tanks with a capacity greater than 50,000 gallons shall meet either the requirements in Part B, subsection 1.9 or use one or a combination of the following alternative methods of Release Detection:

2.4.1.1.1 Conduct an annual Tank tightness test that can detect a 0.5 gallon per hour leak rate;

2.4.1.1.2 Use an automatic Tank gauging system to perform Release Detection at least every thirty (30) Days that can detect a leak rate less than or equal to one gallon per hour. This method shall be combined with a Tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three (3) years;

2.4.1.1.3 Use an automatic Tank gauging system to perform Release Detection at least every thirty (30) Days that can detect a leak rate less than or equal to two gallons per hour. This method shall be combined with a Tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two (2) years;

2.4.1.1.4 Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least once every thirty (30) Days that can detect a leak equal to or less than one half of one percent (0.5%) of flowthrough; and

2.4.1.1.4.1 Perform a Tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two (2) years; or

2.4.1.1.5 Another method approved by the Department if the Owner and Operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in Part H, subsections 2.4.1.1.1 through 2.4.1.1.4. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability of detection.

2.4.2 Owners and Operators of underground Piping associated with Field-Constructed Tanks less than or equal to 50,000 gallons shall meet the Release Detection requirements in Part B, subsection 1.19. Owners and Operators of underground Piping associated with Field-Constructed Tanks greater than 50,000 gallons shall follow either the requirements in Part B, subsection 1.19 or use one or a combination of the following alternative methods of Release Detection:

2.4.2.1 Line tightness test

2.4.2.1.1 Perform a semiannual or annual Line tightness test at or above the Piping operating pressure in accordance with the table below.

MAXIMUM LEAK DETECTION RATE PER TEST SECTION VOLUME		
Test section volume (gallons)	Semiannual test—leak detection rate not to exceed (gallons per hour)	Annual test—leak detection rate not to exceed (gallons per hour)
≤50,000	1.0	0.5
>50,000 to <75,000	1.5	0.75
≥75,000 to <100,000	2.0	1.0
≥100,000	3.0	1.5

2.4.2.1.2 Piping segment volumes ≥100,000 gallons not capable of meeting the maximum three (3) gallons per hour leak rate for the semiannual test may be tested at a leak rate up to six (6) gallons per hour according to the following schedule:

PHASE IN FOR PIPING SEGMENTS ≥100,000 GALLONS IN VOLUME	
First test	After January 11, 2020 and no later than October 13, 2021, may use up to six (6) gallons per hour leak rate.
Second test	After October 13, 2021 and no later than October 13, 2024 may use six (6) gallons per hour leak rate.
Third test	After October 13, 2024 and no later than October 13, 2025 shall use three (3) gallons per hour leak rate.
Subsequent tests	After October 13, 2025, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table 2.4.2.1.1.

2.4.2.2 Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every thirty (30) Days that can detect a leak equal to or less than one half of one percent (0.5%) of flowthrough; and

2.4.2.2.1 Perform a Line tightness test (conducted in accordance with paragraph Part H, subsection 2.4.2.1.1 using the leak rates for the semiannual test) at least every two (2) years; or

2.4.2.3 Another method approved in writing by the Department if the Owner and Operator can demonstrate that the method can detect a Release as effectively as any of the methods allowed in Part H, subsections 2.4.2.1 through 2.4.2.2. In comparing methods, the Department shall consider the size of Release that the method can detect and the frequency and reliability of detection.

2.4.3 Owners and Operators shall maintain Release Detection records in accordance with the recordkeeping requirements in Part A, Section 5.0.

2.5 Applicability of Closure Requirements to Previously Removed or Closed In Place UST Systems

2.5.1 When directed by the Department, the Owner and Operator of an UST system with Field-Constructed Tanks Removed or Closed In Place before January 11, 2020 shall assess the Excavation Zone and close the UST system in accordance with Part B, Section 4.0 if Releases from the UST system, as determined by the Department, pose a current or potential threat to human health, safety or the environment.

13 DE Reg. 1562 (06/01/10)

23 DE Reg. 581 (01/01/20)

Part I Requirements for Installation, Operation and Maintenance of Airport Hydrant Fuel Systems

1.0 General Requirements

1.1 Owners and Operators shall comply with the requirements of Part I for Airport Hydrant Fuel Systems as follows:

1.1.1 For UST systems installed on or before January 11, 2020, the requirements are effective according to the following schedule:

Requirement	Effective date
Upgrading UST systems; general operating requirements; and Operator training	No later than October 13, 2021
Release Detection	No later than October 13, 2021
Closure; financial responsibility and notification (except as provided in Part I, subsection 1.1.2.1)	In effect after January 11, 2020
Release reporting, response, and investigation	In effect

1.1.2 For UST systems installed after January 11, 2020, the requirements apply at installation.

1.1.2.1 After January 11, 2020, all Owners of previously deferred UST systems shall submit a one-time notice of tank system existence to the Department, in accordance with Part A, Section 4.0. Owners and Operators of UST systems in use as of January 11, 2020 shall demonstrate financial responsibility in accordance with the requirements of Part F of these Regulations at the time of submission of the notification form.

1.1.2.2 Except as provided in Part I, Section 2.0, Owners and Operators shall comply with all applicable requirements of Parts A, B, C, D, E, F and G of these Regulations.

1.1.2.3 In addition to the industry referenced standards listed in Part A, Section 3.0, Owners and Operators may use military construction criteria, including Unified Facilities Criteria (UFC) 3–460–01, Petroleum Fuel Facilities, when designing, constructing, and installing Airport Hydrant Fuel Systems and UST systems with Field-Constructed Tanks.

2.0 Additions, exceptions, and alternatives for Airport Hydrant Fuel Systems

2.1 Exception to Piping Secondary Containment Requirements

2.1.1 Owners and operators may use single walled Piping when installing or replacing Piping associated with Airport Hydrant Fuel Systems.

2.2 Upgrade Requirements

2.2.1 No later than October 13, 2021, Airport Hydrant Fuel Systems where installation commenced on or before January 11, 2020 shall meet the following requirements or be Removed or Closed In Place in accordance with the requirements of Part B, Section 4.0.

2.2.2 UST system components in contact with the ground that routinely contain Regulated Substances shall meet the following:

2.2.2.1 Except as provided in Part I, Section 2.0, the new UST system performance standards in Part B, subsections 1.6, 1.7, 1.8, 1.14, 1.15, 1.16 and 1.24.

2.2.3 To prevent spilling and overfilling associated with product transfer to the UST system, all Airport Hydrant Fuel Systems shall comply with new UST system spill and overfill prevention equipment requirements specified in Part B, subsections 1.21 and 1.22.

2.3 Routine Inspection Requirements

2.3.1 In addition to the routine inspection requirements in Part B, subsection 1.31, as applicable, Owners and Operators shall inspect the following additional areas for Airport Hydrant Fuel Systems at least once every thirty (30) Days if confined space entry according to the Occupational Safety and Health Administration (29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection in accordance with Part B, subsection 1.31.2.

2.3.1.1 Hydrant pits—visually check for any damage; remove any liquid or debris; and check for any leaks, and

2.3.1.2 Hydrant Piping vaults—check for any hydrant Piping leaks.

2.4 Release Detection Requirements

2.4.1 Owners and Operators of Airport Hydrant Fuel Systems shall begin meeting the Release Detection requirements described in Part I, subsection 2.4 no later than October 13, 2021.

2.4.2 Owners and Operators of underground Piping associated with Airport Hydrant Fuel Systems shall follow either the requirements in Part B, subsection 1.19 or use one or a combination of the following alternative methods of Release Detection:

2.4.2.1 Line tightness test

2.4.2.1.1 Perform a semiannual or annual Line tightness test at or above the Piping operating pressure in accordance with the table below.

MAXIMUM LEAK DETECTION RATE PER TEST SECTION VOLUME		
Test section volume (gallons)	Semiannual test— leak detection rate not to exceed (gallons per hour)	Annual test— leak detection rate not to exceed (gallons per hour)
≤50,000	1.0	0.5
>50,000 to <75,000	1.5	0.75
≥75,000 to <100,000	2.0	1.0
≥100,000	3.0	1.5

2.4.2.1.2 Piping segment volumes ≥100,000 gallons not capable of meeting the maximum three (3) gallon per hour leak rate for the semiannual test may be tested at a leak rate up to six (6) gallons per hour according to the following schedule:

PHASE IN FOR PIPING SEGMENTS ≥100,000 GALLONS IN VOLUME	
First test	After January 11, 2020 and no later than October 13, 2021, may use up to six (6) gallons per hour leak rate.
Second test	After October 13, 2021 and no later than October 13, 2024 may use six (6) gallons per hour leak rate.
Third test	After October 13, 2024 and no later than October 13, 2025 shall use three (3) gallons per hour leak rate.
Subsequent tests	After October 13, 2025 begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table 2.4.2.1.1

2.4.2.2 Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every thirty (30) Days that can detect a leak equal to or less than one half of one percent (0.5%) of flowthrough; and

2.4.2.2.1 Perform a Line tightness test (conducted in accordance with Part I, subsection 2.4.2.1.1 using the leak rates for the semiannual test) at least every two (2) years; or

2.4.2.3 Another method approved in writing by the Department if the Owner and Operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in Part I, subsections 2.4.2.1 through 2.4.2.2. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability of detection.

2.4.3 Owners and Operators shall maintain Release Detection records in accordance with the recordkeeping requirements in Part A, Section 5.0.

2.5 Applicability of Closure Requirements to Previously Removed or Closed In Place UST Systems

2.5.1 When directed by the Department, the Owner and Operator of an Airport Hydrant Fuel System Removed or Closed In Place before January 11, 2020 shall assess the Excavation Zone and close the UST system in accordance with Part B, Section 4.0 if Releases from the UST system, as determined by the Department, pose a current or potential threat to human health, safety or the environment.

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