COLORADO DEPARTMENT OF LABOR AND EMPLOYMENT

DIVISION OF OIL AND PUBLIC SAFETY

STORAGE TANK REGULATIONS

7 C.C.R. 1101-14

Effective: ~~October 15, 2014~~January 1, 2017

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(Found at 7 C.C.R. 1101-14)

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ARTICLE 1 GENERAL PROVISIONS

Section 1-1 Statement of Basis and Purpose

These regulations are promulgated to establish rules for the design, installation, registration, construction, and operation of storage tanks used to store regulated substances (including petroleum), response to releases of regulated substances from these tanks, and to describe the financial responsibility of storage tank owner/operators. The main purpose of these regulations is to reduce damage to the environment and risk to the public caused by leaking petroleum storage tanks and to mitigate such damage effectively when it occurs.

These regulations do not apply to material classified as hazardous wastes under Subtitle C of the U.S. Solid Waste Disposal Act.

The amendment to Article 9 of these regulations is developed pursuant to the Colorado Revised Statutes 8-20.5-103(9) that created the Petroleum Cleanup and Redevelopment Fund. The rules are designed to establish the implementation and operational guidelines of this fund.

Section 1-2 Technical Rationale

The technical requirements of these regulations are supported by many studies made by petroleum industry associations, the National Fire Protection Association (NFPA), the American Society of Testing and Materials (ASTM), and by or at the behest of the U.S. Environmental Protection Agency (EPA). The requirements represent the consensus of informed persons with regard to the best methods for reducing the hazards posed by storage tanks to acceptable levels.

Section 1-3 Statutory Authority

The amendments to these regulations have been created pursuant to Title 8 Article 20 Section 102 and Article 20.5 Sections 202 and 302 of the Colorado Revised Statutes (C.R.S.). The design, construction, location, installation, and operation of liquid fuel systems and equipment and the handling of liquid fuels shall conform to the minimum standards as prescribed by the applicable sections of NFPA 30.

Section 1-4 Effective Date

These amended rules shall be effective on ~~October 15, 2014~~January 1, 2017. The prior editions of the combined UST/AST regulations were published October 15, 2014, January 1, 2014, May 1, 2013, April 14, 2011, January 1, 2009, August 1, 2008, April 30, 2006, May 30, 2005, August 1, 2004, August 1, 2002, February 1, 1999, and January 1, 1997. Prior editions of the UST rules were published effective September 30, 1995 and December 1, 1989. Prior editions of the AST rules were published effective September 30, 1995 and October 1, 1994. A prior edition of the Emission Inspection rules was published effective January 1, 1990.

Section 1-5 Definitions

Terms in these regulations shall have the same definitions as those found in Articles 20 and 20.5 of Title 8 of the Colorado Revised Statutes. In addition, unless the context otherwise requires:

"Abandoned tank" means an underground or aboveground petroleum storage tank that the current tank owner or operator or current property owner did not install, has never operated or leased to another for operation, and had no reason to know was present on the site at the time of site acquisition.

"Aboveground storage tank" (AST) means any one or a combination of containers, vessels, and enclosures, including structures and appurtenances connected to them, constructed of non-earthen materials, including but not limited to concrete, steel, or plastic, which provide structural

support, used to contain or dispense fuel products and the volume of which, including the pipes connected thereto, is ninety percent or more above the surface of the ground, is not permanently closed, and except those exempted in statute and these regulations.

"Aboveground storage tank (AST) system" means all ASTs at a facility, all the connected piping and ancillary equipment, all loading facilities, and all containment systems if applicable.

"Alternative f~~F~~uel" means a motor fuel that combines petroleum-based fuel products with renewable fuels.

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

"ASTM International (ASTM)" means an international voluntary consensus standards organization formed for the development of standards on characteristics and performance of materials, products, systems, and services, and the promotion of related knowledge.

"Atmospheric t~~T~~ank" is a storage tank that has been designed to operate at pressures from atmospheric through 0.5 psig (760 mm Hg through 780 mm Hg) measured at the top of the tank.

"Bodily injury" shall have the meaning given to this term by applicable Colorado 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.

"Bulk p~~P~~lant" is that portion of a property where liquids are received by tank vessel, pipelines, tank car, or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, portable tank or container. [Note: A bulk plant is normally a wholesale fuel facility where petroleum products are stored prior to resale or redistribution.]

"Calendar days" means consecutive days including weekends and nationally recognized holidays.

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

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

"Certificate of conformance" means a document issued by the national type evaluation program constituting evidence of conformance of a weighing and measuring device with the requirements of National Institute of Standards and Technology (NIST) Handbook 44.

"Certificate of Eligibility" is a document that entitles the bearer to participate in the Fund without further determination of compliance by the Director, if that bearer is a mortgagee who has acquired, by foreclosure or receipt of a deed in lieu of foreclosure, property on which the petroleum storage tanks covered by the certificate are located.

"CFR" Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government

"Change in s~~S~~ervice" means continued use of an UST or AST to store a non-regulated substance.

"Chemicals of concern" (COCs) are chemical compounds that have been identified for evaluation due to specific risks to human health and/or the environment[CU1].

"Committee" means the Petroleum Storage Tank Committee created in C.R.S. § 8-20.5-104.

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

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

"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 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).

"Contamination" means the presence of a regulated substance at or below ground that originated from a regulated storage tank system.

~~"Corrective action" is the sequence of actions that include any or all of the following: interim remedial action, remediation, operation and maintenance, monitoring of progress, and termination of remedial action.~~

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

"Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the system (e.g., tank from piping).

"Dispenser" means equipment that dispenses regulated substances from the storage tank system.

"Dispenser system" means the dispenser and the equipment necessary to connect the dispenser to the storage tank system.

"Director" means the Director of the Division of Oil and Public Safety of the Colorado Department of Labor and Employment or any designees thereof which may include certain employees of the Division of Oil and Public Safety of the Colorado Department of Labor and Employment or other persons.

"Downgradient" is in the direction of maximum decreasing static head.

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

"Electrolyte" means the soil or liquid adjacent to and in contact with the systems, including the moisture and other chemicals contained in it; the electrically conductive material between the tank and its environment;

"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.

"Exposure pathway" is the course that a chemical of concern takes from a source area to a point of exposure. An exposure pathway describes a unique mechanism by which a person or sensitive environment is assumed to be exposed to a chemical of concern. Each exposure pathway includes a source, an exposure route, and a point of exposure. If the exposure point differs from the source, transport or exposure media (e.g., air, water, dust) are also included. All exposure pathways are assumed to be complete unless an exposure pathway elimination criteria is demonstrated. Exposure pathway elimination criteria are listed in the Owner/Operator Guidance Document.

"Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

"Financial reporting year" means the latest consecutive twelve-month period for which any report used to support a financial test is prepared. "Financial reporting year" may thus comprise a fiscal or a calendar year period.

"Fire resistant tank" is an atmospheric single or double walled AST with thermal insulation that has been evaluated for resistance to physical damage and for limiting the heat transferred to the primary tank when exposed to a hydrocarbon pool fire, and is listed in accordance with UL 2080 or an equivalent test procedure, and meets the additional requirements of NFPA.

"Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

"Fund" means the Petroleum Storage Tank Fund created in C.R.S. -§ 8-20.5-103.

"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.

"Good Engineering Practice", "Good Engineering Standards", and "Nationally Recognized Standard" means in accordance with standards developed by nationally recognized laboratories or associations such as: Underwriters Laboratory (U.L.), American National Standards Institute (ANSI), American Petroleum Institute (API), American Society for Testing and Materials (ASTM), American Society of Mechanical Engineers (ASME), Steel Tank Institute (STI), National Association of Corrosion Engineers (NACE), or the National Fire Protection Association (NFPA).

"Hazardous substance UST system" means an UST system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

"Heating oil" means petroleum that is No. 1, No. 2, No. 4--light, No. 4--heavy, No. 5--light, No. 5--heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

"Hydraulic conductivity" is the coefficient of proportionality describing the rate at which water can move through a permeable medium.

"Hydraulic g~~G~~radient" is the slope of the water table in the direction of groundwater flow. This slope is typically expressed as a unit change in water table elevation per unit horizontal distance (e.g. ft/ft).

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

"Imminent threat to human health or safety or the environment" means a condition that creates a substantial probability of harm, when the probability and potential extent of harm make it reasonably necessary to take immediate action to prevent, reduce, or mitigate the actual or potential damages to human health or safety or the environment.

"Installation of a n~~N~~ew m~~M~~otor f~~F~~uel d~~D~~ispenser s~~S~~ystem" means the installation of a new motor fuel dispenser and the equipment necessary to connect the dispenser to the system. It does not mean the installation of a motor fuel dispenser installed separately from the equipment needed to connect the dispenser to the tank system. For purposes of these rules, the equipment necessary to connect the motor fuel dispenser to the tank system may include check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are beneath the dispenser and connect the dispenser to the underground piping.

"Insurer" or "qualified insurer" means an insurer or group that is authorized to transact the business of insurance or authorized to provide insurance as an excess or surplus lines insurer in Colorado.

"Light non-aqueous phase liquid" (LNAPL) refers to a regulated substance that is present in soil and on groundwater as a non-aqueous phase liquid (e.g., liquid not dissolved in water.)

"Liquid" is any material that has a fluidity greater than that of 300 penetration asphalt when tested in accordance with ASTM D 5, Test for Penetration for Bituminous Materials. When not otherwise identified, the term "liquid" shall mean both flammable and combustible liquids.

[Note 1: Class I flammable liquids include all grades of Gasoline, and most motor fuels blended using alcohol and MTBE (methyl-tertiary-butyl-ether).]

[Note 2: Class II combustible liquids include #1 and #2 Diesel Fuels, #1 and #2 Heating Oil, Kerosene, and Jet-A grade Jet fuel.]

[Note 3: Class III combustible liquids include most Lubricating Oils, and Heavy Fuel oils.]

"Liquid, combustible" is a liquid having a flash point at or above 100°F (37.8°C). Combustible Liquids are classified as follows:

(1) CLASS II liquids have a flash point at or above 100°F (37.8°C) and below 140°F (60°C).

(2) CLASS IIIA liquids have a flash point at or above 140°F (60°C) and below 200°F (93°C).

(3) CLASS IIIB liquids have a flash point at or above 200°F (93°C).

"Liquid, flammable" is a liquid having a flash point below 100°F (37.8°C) and having a Reid vapor pressure not exceeding 40 psia (2068 mmHg) at 100°F (37.8°C). Flammable Liquids are classified as Class I liquids. Class I liquids are further subclassified as follows:

(1) CLASS IA liquids have a flash point below 73°F (22.8°C) and a boiling point below 100°F (37.8 ^{o} C).

(2) CLASS IB liquids have a flash point below 73°F (22.8°C) and a boiling point at or above 100°F (37.8°C).

(3) CLASS IC liquids have a flash point at or above 73°F (22.8°C) and below 100°F (37.8°C).

"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.

"Marine s~~S~~ervice s~~S~~tation" is that portion of a property where liquids used as fuels are stored and dispensed from fixed equipment on shore, piers, wharves, or floating docks into the fuel tanks of self-propelled craft, including all facilities used in connection therewith.

"Media" are intervening substances through which something is transmitted or carried (e.g. soil, water, or air).

"Mortgagee" refers to a mortgagee or the holder of an evidence of debt secured by a mortgage or deed of trust.

"Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, fuel products as defined in C.R.S. § 8-20.5-101(6), or any grade of gasohol, and is typically used in the operation of a motor engine.

"Motor fuel dispensing facility" means that portion of a property where motor fuels are stored and dispensed from fixed equipment into the fuel tanks of motor vehicles or marine craft or into approved containers, including all equipment used in connection therewith.

(a) “Fleet vehicle motor fuel dispensing facility” means a motor fuel dispensing facility at a commercial, industrial, governmental, or manufacturing property where motor fuels are dispensed into the fuel tanks of motor vehicles that are used in connection with the business or operation of that property by persons within the employ of such business or operation.

"Net worth" means the 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 economic benefits obtained or controlled by an owner/operator.

"Noncommercial purposes" with respect to motor fuel at farms and residences means not for resale.

"Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed.

”Operator” means any person in control of, or having responsibility for the operation of an underground or above ground storage tank system.

“Orphaned tank” means an underground storage tank which is owned or operated by an unidentified owner or no longer in use and was not closed and the property has changed ownership prior to December 22, 1988, and such property is no longer used to dispense fuels.

"Out of s~~S~~ervice" means that the tank is not being operated in accordance with its intended purpose.

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

”Owner” means:

(1) In the case of an underground storage tank in use on or after November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances;

(2) In the case of an underground storage tank in use before November 8, 1984, but no longer in use on or after November 8, 1984, any person who owned such tank immediately before the discontinuation of its use; or

(3) Any person who owns an aboveground storage tank.

(4) Regarding reporting and responding to releases of regulated substances, Owner means the person who owned the tank system at the time of the release. The term "owner" does not include any person who, without participating in the management of an underground storage tank and otherwise not engaged in petroleum production, refining, and marketing, holds indicia of ownership primarily to protect a security interest in or lien on the tank or the property where the tank is located.

"Owner(s)/operator(s)" means that the task to which this phrase is attached may be performed by either the owner or the operator. If neither the owner nor the operator performs the task, both shall be in violation of these regulations. Duplication of the task is not required.

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

"Petroleum" means crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

"Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials and in accordance with NFPA or other nationally recognized piping standards for petroleum storage tanks. Piping routinely contains and conveys regulated substances from the underground tank(s) to the dispenser(s) or other end-use equipment. Such piping includes any elbows, couplings, unions, valves, or other in-line fixtures that contain and convey regulated substances from the underground tank(s) to the dispenser(s). This definition does not include vent, vapor recovery, or fill lines not connected to remote fills.

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

"Point of e~~E~~xposure " (POE) is the location at which a person or sensitive environment is assumed to be exposed to a chemical of concern. POEs for benzene, toluene, ethyl benzene and xylenes are: property boundaries, surficial soils, subsurface utilities, structures, groundwater wells, surface water, and sensitive environments. POEs for MTBE are: water supply wells that are used for human consumption and surface water features that are used for human consumption.

"Product d~~D~~eliverer" means any person who delivers or deposits product into an UST. This term may include major oil companies, jobbers, petroleum transportation companies, or other product delivery entities.

"Property damage" shall have the meaning given this term by applicable Colorado laws. 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.

"Protected tank" is an atmospheric AST with integral secondary containment and thermal insulation that has been evaluated for resistance to physical damage and for limiting the heat transferred to the primary tank when exposed to a hydrocarbon pool fire and is listed in accordance with ANSI/UL 2085 or an equivalent test procedure, and meets the additional requirements of NFPA.

"Provider of financial assurance" means an entity that provides financial assurance to an owner/operator of an UST through one of the mechanisms listed below, including but not limited to an insurer, issuer of a letter of credit, or the trustee of a trust fund.

"Red Tag" means a tag, device, or mechanism on the tank's fill pipes that clearly identifies an UST as ineligible for product delivery. The tag or device is easily visible to the product deliverer and clearly states and conveys that it is unlawful to deliver to, deposit into, or accept product into the ineligible UST. The tag, device, or mechanism is generally tamper resistant.

"Reimbursement" means an assignment of money from the Fund to reimburse a person for approved costs incurred in remediating petroleum contamination.

"Registered Service Agency (RSA)" means any agency, firm, company or corporation that for hire, award, commission or any other payment of any kind installs, services, repairs or reconditions a commercial weighing or measuring device and that voluntarily registers with the division. Under agency registration, identification of individual servicepersons shall be required.

"Regulated substance" for UST systems has the same meaning as in C.R.S. § 8-20.5-101(13) as follows:

(1) Any substance defined in ~~s~~Section 101 (14) of the federal "Comprehensive Environmental Response, Compensation, and Liability Act of 1980", as amended, but not including any substance regulated as a hazardous waste under subtitle (C) of Title II of the federal "Resource Conservation and Recovery Act of 1976", as amended.

(2) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

(3) Alternative fuel

(4) Renewable fuel

"Regulated substance" for AST systems means regulated fuel products as defined in C.R.S. § 8-20.5-101(6), including alternative fuels and renewable fuels as defined in CRS 8-20.5-101(2.5) and (14.5) as follows:

(1) All gasoline, aviation gasoline, diesel, aviation turbine fuel, jet fuel, fuel oil, biodiesel, biodiesel blends, kerosene, all alcohol blended fuels, gas or gaseous compounds, and other volatile, flammable, or combustible liquids, produced, compounded, and offered for sale or used for the purpose of generating heat, light, or power in internal combustion engines or fuel cells, for cleaning or for any other similar usage.

(2) Alternative fuel

(3) Renewable fuel

"Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing of a regulated substance from a regulated tank system into the environment.

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

~~"Release discovery" means the earlier of the suspected or confirmed release dates.~~

"Remediation" means actions taken to reduce concentrations of chemicals of concern (including natural attenuation), or prevent migration of chemicals of concern to POEs. Remediation shall be implemented for sites where no further action is not appropriate.

"Renewable f~~F~~uel" means a motor vehicle fuel that is produced from plant or animal products or wastes, as opposed to fossil fuel sources.

"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 system component ~~to operating condition~~ that has caused a release of product from an AST or UST system or has failed to function properly.

"Replace" This term applies to underground storage tanks and piping.

For underground storage tanks – Replace means to remove an existing underground storage tank and install a new underground storage tank.

For underground piping – Replace means to remove and put back in any amount of piping connected to ~~an UST~~a tank system. The secondary containment requirements for replaced piping are triggered when a minimum of 50% or 50 feet (whichever is less) of the total length of piping connected to a single ~~underground~~ tank is replaced. The total length of piping connected to a single ~~underground~~ tank includes the length piping from that tank to the farthest connected dispenser, including piping runs between dispensers connected to that tank.

"Reportable q~~Q~~uantity" means quantities of a released regulated substance which equal or exceed the reportable quantity under the federal "Comprehensive Environmental Response, Compensation, and Liability Act of 1980", as amended, and petroleum products in quantities of twenty-five gallons or more.

"Residential tank" is a tank located on property used primarily for dwelling purposes.

"Retail m~~M~~otor f~~F~~uel d~~D~~evice" (RMFD) means a device designed for the measurement and delivery of liquid fuel products for internal-combustion engines. The term “motor-fuel dispenser” means the same as “motor-fuel device”.

"Risk-based corrective action (RBCA)" means a consistent decision making process for the assessment and response to a petroleum release, based on the protection of human health and the environment according to ASTM 1739.

"Secondary c~~C~~ontainment" This term applies to AST and UST Systems

For AST systems secondary containment is containment which prevents any release from an AST system from reaching land or waters outside of the containment area, and can include remote impounding, diking, or different types of AST construction. Where underground piping is connected to an AST, the definition of “secondary containment” for UST systems also applies to the piping.

For UST systems secondary containment is a release prevention and release detection system for an underground tank and/or piping. The release prevention part of secondary containment is an underground tank and/or piping having an inner and outer barrier. Between these two barriers is a space for monitoring. The release detection part of secondary containment is a method of monitoring the space between the inner and outer barriers for a leak or release of regulated substances from the underground tank and/or piping (called interstitial monitoring). This term includes containment sumps when used for interstitial monitoring of piping. ~~Interstitial monitoring must meet the release detection requirements in 7 C.C.R. 1101-14 § 2-4-4 (g).~~

"Secondary c~~C~~ontainment t~~T~~ank" is a shop fabricated AST which includes a steel or reinforced concrete secondary shell that will provide containment of the entire capacity of the inner tank in case of leaks or ruptures of the inner tank and having means for monitoring the interstitial space for a leak.

"Sensitive e~~E~~nvironment" is an area of particular environmental value where regulated petroleum contamination could pose a greater threat than in other less sensitive areas. Sensitive environments include: critical habitat for federally endangered or threatened species, national parks, national monuments, national recreation areas, national wildlife refuges; national forests, campgrounds; recreational areas, game management areas, wildlife management areas, designated federal wilderness areas, wetlands, wild and scenic rivers, state parks, state wildlife refuges, habitat designated for state endangered species, fishery resources, state designated natural areas, wellhead protection areas, classified groundwater areas, and county or municipal parks.

"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 where the effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

"Service s~~S~~tation" is a place where motor fuels are sold to the general public for cash or credit and are dispensed into the fuel tanks of motor vehicles or approved containers. This does not include unattended cardlock system facilities at bulk plants which only use proprietary cards specific to the cardlock system in question.

"Significant v~~V~~iolation" means the failure of a person to comply with any requirement of Article 2 of 7 C.C.R. 1101-14, which includes any of the following:

(a) A violation that is causing, or threatens to cause a liquid release of a regulated substance from an UST system, including, but not limited to: the failure of any required overfill prevention system, where the failure is causing or threatens to cause a release; or the failure of a required spill containment structure, where the failure is causing or threatens to cause a release to the environment due to a spill or an overfill.

(b) A violation that impairs the ability of an UST system to detect a liquid leak or contain a liquid release of a regulated substance in the manner required by law, including, but not limited to: tampering with leak detection equipment so that the equipment is no longer capable of detecting a leak at the earliest possible opportunity.

(c) A chronic violation or a violation that is committed by a recalcitrant violator.

"Site c~~C~~heck" means collecting soil and/or groundwater samples for laboratory analysis from locations most likely to demonstrate the presence of a release from a regulated storage tank system.

"Site classification" is a qualitative evaluation of a site based on known or readily available information to identify the need for interim remedial actions and further information gathering.

"Source concentration" is the highest concentration, in soil and/or groundwater and /or vapor, of the chemicals of concern.

"State inspector" is a person who is employed or authorized by the division to perform inspections of facilities storing regulated substances.

"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.

"Subsurface soils" are all soils located at a depth of greater than one meter below the ground surface.

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

"Surficial soils" are all soils located from the ground surface to a depth of one meter below ground surface.

"System t~~T~~est" means a test of tank system components, including any associated delivery piping, secondary containment or spill control component, to identify releases of regulated substances.

"Temporary closure" means a period of time that a storage tank is empty but is not permanently closed or has not changed service to store a non-regulated substance. This term does not apply when a tank system is emptied for repair.

"Tier I risk-based screening levels (RBSLs)" are the default maximum concentrations for COCs used to determine whether remediation (cleanup) is required.

"Tier II s~~S~~ite-specific target level(s) (SSTLs)" are the risk-based remedial action target levels for COCs developed for a particular site using site-specific geological and hydrogeological data in a predictive model.

"Tier III closure criteria" establishes conditions where all exposure pathways have been eliminated, even though dissolved-phase COCs remain above Tier I RBSLs beyond the release property boundary and beneath, but not beyond the adjoining public roadway.

"Tier IV closure criteria" establishes conditions where all exposure pathways have been eliminated, even though dissolved-phase COCs remain above Tier I RBSLs beyond the release property boundary irrespective of land use and where no storage tanks remain on the release property.

"Training program" means any program that provides information to and evaluates the knowledge of a Class A, Class B, or Class C operator through testing, practical demonstration, or another approach acceptable to the implementing agency regarding requirements for UST systems that meet the requirements of S~~s~~ection 2-3-1.

"Transportation-related facilities" as used in these regulations means facilities where all ASTs with capacities from 660 to 39,999 gallons are regulated by the USDOT.

"Trustee" is a member of a Trust that is an applicant to the Fund. A trustee can be an individual or a company that acts on behalf of the Trust.

"Ullage" is the portion of a storage tank that does not contain liquid.

"Unattended c~~C~~ardlock s~~S~~ystem" is a vehicle fueling facility, which uses a mechanical or electronic method of tracking fuel deliveries using an identification card.

"Under-d~~D~~ispenser c~~C~~ontainment (UDC)" means containment underneath a dispenser that will prevent leaks from the dispenser and piping within or above the UDC from reaching soil or groundwater.

"Underground storage tank" (UST) means any one or combination of tanks, including underground pipes connected thereto, except those exempted in statute and these regulations, that 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 or more beneath the surface of the ground and is not permanently closed.

"Underground storage tank (UST) system" refers to an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

"Upgrade" means the addition or retrofit of some systems (such as cathodic protection, lining, modification of the system piping, or spill and overfill controls, etc.) to improve the ability of an UST or AST system to prevent the release of product.

"Vault" means an enclosure (other than a secondary containment tank), either above or below-grade, that completely encloses an AST.

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

"Working days" consecutive days excluding weekends and nationally recognized holidays.

Section 1-6 Glossary of Acronyms and Initializations

ANSI	American National Standards Institute	NFPA	National Fire Protection Association
API	American Petroleum Institute	NIOSH	National Institute of Occupational Safety and Health
AST	Aboveground storage tank	NIST	National Institute of Standards and Technology
ASTM	ASTM International	NTEP	National Type Evaluation Program
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene	OPS	Division of Oil and Public Safety
CAP	Corrective Action Plan	PAH	Poly-aromatic hydrocarbons
CC	Certificate of Conformance	PP	Pressurized piping
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	Psig	Pounds per square inch gauge
CFR	Code of Federal Regulations	PSTF	Petroleum Storage Tank Fund
COC	Chemicals of concern	RBCA	Risk-based corrective actions
C.R.S.	Colorado Revised Statutes	RBSL	Risk-based screening level
EPA	United States Environmental Protection Agency	RMFD	Retail Motor Fuel Dispenser/Device
FRP	Fiberglass reinforced plastic	RD	Release Detection
FR	Financial responsibility	SCR	Site Characterization Report
ICC	International Code Council	SIR	Statistical Inventory Reconciliation
IRA	Initial Risk Assessment	SPCC	Spill Prevention, Control, and Countermeasure
LNAPL	Light Non-Aqueous Phase Liquid	SSTL	Site Specific Target Level
LPG	Liquid petroleum gas	STP	Submersible Turbine Pump
MRR	Monitoring and Remediation Report	TPH	Total Petroleum hydrocarbons
MTBE	Methyl-tertiary-butyl-ether	VP	Vapor Pressure
NACE	National Association of Corrosion Engineers	UDC	Under Dispenser Containment
NFA	No further action	UL	Underwriters Laboratories/Underwriters Laboratories of Canada
NFAR	No Further Action Report	UST	Underground storage tank

Section 1-7 Codes, Documents or Standards incorporated by reference

The following codes, documents or standards are incorporated by reference:

American National Standards Institute (ANSI)

Standard B31, American National Standard Code for Pressure Piping, published October 14, 2003.

Standard B31.3, Petroleum Refinery Piping, published February 14, 2002.

Standard B31.4, Liquid Petroleum Transportation Piping System, published August 5, 2002.

American Petroleum Institute (API)

Recommended Practice 1604, Removal and Disposal of Used Underground Petroleum Storage Tanks, published November 2001.

Publication 650, Welded Steel Tanks for Oil Storage, 11th Edition

Publication 1615, Installation of Underground Petroleum Storage Systems, published November 2001.

Publication 1621, Recommended Practice for Bulk Liquid Stock Control at Retail Outlets, published 1993.

Publication 1626, Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations, published January 18, 2000.

Publication 1627, Storage and Handling of Gasoline-Methanol/Co-solvent Blends at Distribution Terminals and Service Stations, published January 18, 2000.

Publication 1631, Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks, published June 2001.

Publication 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, published June 2002.

Publication 2015, Cleaning Petroleum Storage Tanks, published August 2001.

Publication 2015A, Lead Hazard Associated with Tank Entry, published 1982.

Publication 2015B, Cleaning Open Top and Floating Roof Tanks, published August, 1981.

Publication 2200, Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines, published May 1999.

Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction

Standard No. 2000, Venting Atmospheric and Low-Pressure Storage Tanks

American Society of Testing and Materials (ASTM)

Standard D5, Test for Penetration for Bituminous Materials, published June 1, 2005.

Standard D4021-86, Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks, published June 15, 1992.

Standard D4814-16a, Standard Specification for Automotive Spark-Ignition Engine Fuel, published February 2016.

Association for Composite Tanks (ACT)

ACT-100, Specification for the Fabrication of FRP Clad Underground Storage Tanks, published 1989.

Environmental Protection Agency (EPA)

EPA Form 50 FR 46602, published November 8, 1985

Hazardous and Solid Waste Amendments of 1984, Public Law 98-616

National Association of Corrosion Engineers (NACE)

Standard RP-01-69, Control of External Corrosion on Submerged Metallic Piping Systems, published April 11, 2002.

Standard RP-02-85, Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems, published April 6, 2002.

National Fire Protection Association (NFPA)

Publication NFPA 30, Flammable and Combustible Liquids Code, 2008 Edition.

Publication NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2008 Edition.

Publication NFPA 70, National Electrical Code, published August 18, 2005.

Publication NFPA 80, Standard for Fire Doors and Fire Windows, published 1999.

Publication NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems, published January 2, 2003.

Publication NFPA 91, Standard for the Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal or Conveying, published August 4, 2004.

Publication NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids, published 1990.

National Institute for Occupational Safety and Health (NIOSH)

Criteria for a Recommended Standard, Working in Confined Spaces, DHHS (NIOSH) Publication No.80-106, December 1979.

National Institute of Standards and Technology

NIST Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Commercial Weighing and Measuring Devices", published 2012

NIST Handbook 130, "Uniform Laws and Regulations in the area of legal metrology and engine fuel quality", published 2012

National Leak Prevention Association (NLPA)

National Leak Prevention Association Standard 631, Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection, published 1991.

Petroleum Equipment Institute (PEI)

Publication RP100, Recommended Practices for Installation of Underground Liquid Storage Systems, published 2005.

Steel Tank Institute (STI)

Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks, published July 2005.

SP001, Standard for the Inspection of Aboveground Storage Tanks, 5th Edition

Underwriters Laboratories/Underwriters Laboratories of Canada (UL)

Subject 971, UL Listed Non-Metal Pipe, published January 2, 2004.

Standard 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, published July 27, 1998.

Standard 567, Pipe Connectors for Flammable and Combustible and LP Gas, published October 22, 2004.

Standard 1316, Standard for Glass- Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, published April 2, 1996.

Standard 1746, Corrosion Protection Systems for Underground Storage Tanks, published February 8, 2002.

CAN4-S603-M85, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, published 2000.

CAN4-S603.1-M85, Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids, November 2003.

CAN4-S615-M83, Standard for Reinforced Plastic Underground Tanks for Petroleum Products, published 1998.

CAN4-S631-M84, Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems, published 1998.

CAN4-S633-M81, Flexible Underground Hose Connectors, published August 1999.

Guide ULC-107, Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids, published 1993.

Section 1-8 Inspection of incorporated codes

Interested parties may inspect the referenced incorporated materials by contacting the ~~Program Manager~~Director.

Section 1-9 Later amendments not included

This rule does not include later amendments to or editions of the incorporated material.

ARTICLE 1.5 MOTOR FUEL DISPENSING AND PRODUCT QUALITY

The method of sale and quality of motor fuels are regulated by the Director to ensure consumer protection and equity in the marketplace. This article lists the minimum specifications and tolerances for dispensing equipment and motor fuel quality to ensure compliance with Colorado statutes and adopted codes and standards. Further description of these requirements can be found in guidance documents, policies and procedures provided by the Director.

Section 1.5-1 Applicability

(a) The requirements of Sections 1.5-2 and 1.5-3 shall apply to dispensers and product quality at retail facilities.

(b) All retail and non-retail motor fuel dispensers must comply with the minimum standards as prescribed by the applicable sections of National Fire Protection Association (NFPA) 30A "Code for Motor Fuel Dispensing Facilities and Repair Garages".

Section 1.5-2 Retail Motor Fuel Dispensers Inspection and Testing

(a) All retail motor fuel dispensers (RMFD) shall be suitable for their intended use, properly installed, and accurate, and shall be maintained in that condition by their owner/operator.

(b) All RMFDs shall ~~be traceable to~~ have an active National Type Evaluation Program (NTEP) Certificate of Conformance (CC) prior to its installation or use for commercial purposes.

(c) The division shall be notified when any new or remanufactured RMFD is placed in service at a new or existing installation.

(1) Notification shall be submitted using a placed in service report provided by the division.

(d) No owner/operator of any RMFD shall use the RMFD for the measurement of liquid fuel products unless it has been proved in a manner acceptable to the Director and sealed as correct by ~~an inspector employed by the Director or another service person who is registered with and authorized by the Director to place RMFDs into service~~ a state inspector or registered service agency.

(e) If any RMFD fails to comply with any of the provisions of this regulation, ~~an inspector employed by the Director~~ a state inspector shall seal it in such a manner as to prohibit its use, and it shall remain sealed until it complies with all of the provisions of this regulation.

(1) When an RMFD is brought back into compliance with this regulation it must be placed back in service by ~~an inspector employed by the Director or another service person that is registered with and authorized by the Director to place RMFDs into service~~ a state inspector or registered service agency.

(f) All RMFDs shall comply with the minimum standards as prescribed by the applicable sections of NFPA 30A "Code for Motor Fuel Dispensing Facilities and Repair Garages", NIST Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Commercial Weighing and Measuring Devices," NIST Handbook 130, "Uniform Laws and Regulations in the area of legal metrology and engine fuel quality" except as modified or rejected by this regulation or by the Director.

(g) All RMFDs shall be labled in accordance with the minimum standards as prescribed by the applicable sections of NFPA 30A "Code for Motor Fuel Dispensing Facilities and Repair Garages" and NIST Handbook 130, "Uniform Laws and Regulations in the area of legal metrology and engine fuel quality", United States Environmental Protection Agency regulations, and Colorado Statutes, except as modified or rejected by this regulation or by the director.

Section 1.5-3 Product Quality

(a) All liquid fuel products in Classes I, II, and III shall comply with the applicable specifications of ASTM, which are found in ~~s~~Section 5 of that organization's publication "Petroleum Products, Lubricants, and Fossil Fuels" (ASTM 4814).

[Note 1: Class I flammable liquids include all grades of gasoline, and most motor fuels blended using alcohol and MTBE (methyl-tertiary-butyl-ether).]

[Note 2: Class II combustible liquids include #1 and #2 diesel fuels, #1 and #2 heating oil, kerosene, and Jet-A grade jet fuel.]

[Note 3: Class III combustible liquids include most lubricating oils and heavy fuel oils.]

(b) If gasoline is blended with ethanol, the ASTM D 4814 specifications shall apply to the base gasoline prior to blending. Blends of gasoline and ethanol shall not exceed the ASTM D 4814 vapor pressure standard, except that, if the ethanol is blended at nine percent or higher but not exceeding ten percent, the blend may exceed the ASTM D 4814 vapor pressure standard by no more than 1.0 PSI.

(c) In addition to the above, all liquid fuel products shall comply with the requirements published in the NIST Handbook 130 "Uniform Laws and Regulations in the area of legal metrology and engine fuel quality" except as modified or rejected by this regulation.

(d) The allowable reductions in vehicle antiknock requirements for altitude are 4.5 for less than 89 Antiknock Index (AKI), and 3.0 for greater than 89 AKI. Fuel may be marketed using these reductions, but actual AKI minimum must be posted.

ARTICLE 2 UNDERGROUND STORAGE TANKS

Section 2-1 UST Program Scope and Applicability

UST systems in Colorado are regulated to protect the people and environment of Colorado from the potentially harmful effects of the regulated substances contained within UST systems. The purpose of this article is to present to owner/operators of UST systems a description of the minimum general standards for design, construction, installation and operation of these systems to be in compliance with these regulations and Colorado statutes. Further description of these requirements can be found in guidance documents, policies and procedures provided by the Director.

2-1-1 Applicability

(a) Regulated UST systems

These UST regulations apply to all owners/operators of an UST system except as otherwise provided in paragraphs (b), (c), and (d) of this section. ~~Any UST system listed in paragraph (c) of this section must meet the requirements of 2-2-1.~~

(1) Previously deferred UST systems. Airport hydrant fuel distribution systems, UST systems with field-constructed tanks, and UST systems that store fuel solely for use by emergency power generators must meet the requirements of this section as follows:

(i) Airport hydrant fuel distribution systems and UST systems with field-constructed tanks must meet the requirements in S~~s~~ection 2.5 (UST Systems with Field Constructed Tanks and Airport Hydrant Distribution Systems).

(ii) UST systems that store fuel solely for use by emergency power generators installed on or before January 1, 2017 must meet the release detection requirements of §2.3.4 on or before January 1, 2020.

[Note: UST systems storing fuel solely for use by emergency power generators that existed on or before January 1, 2017 were already required to meet all other applicable requirements of this article.]

(iii) UST systems that store fuel solely for use by emergency power generators installed after January 1, 2017 must meet all applicable requirements of this section at installation

(2) Any UST system listed in paragraph (c) of this section must meet the requirements of Section 2-1-1-(d) (Installation Requirements for Partially Excluded UST Systems).

(b) Excluded UST Systems

The following UST systems or installations are excluded from these UST regulations:

~~-~~(1) 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;

(2) 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;

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

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

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

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

(7) Any farm or residential UST with a capacity of 1,100 gallons or less that is used for storing motor fuel for non-commercial purposes;

(8) Any tank used for storing heating oil for consumptive use on the premises where it is located;

(9) Any septic tank;

(10) Any pipeline facility, including its gathering lines, which is regulated under chapter 601 of Title 49 U.S.C.~~the federal "Natural Gas Pipeline Safety Act of 1968", as amended~~, or which is an intrastate pipeline facility regulated under state laws as provided in chapter 601 og Title 49 U.S.C. 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~~the federal "Hazardous Liquid Pipeline Safety Act of 1979". As amended, or regulated under Colorado law if such facility is an intrastate facility~~;

(11) Any surface impoundment, pit, pond, lagoon, or landfill;

(12) Any storm-water or Wastewater collection system;

(13) Any flow-through process tank;

(14) Any liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;

(15) Any storage tank situated in an underground area, such as a basement, cellar, mine-working, drift, shaft, or tunnel area, if the tank is situated upon or above the surface of the floor.

[Note: Section 2-1-1(b)(~~2~~1) through (6) are excluded from these UST regulations per CFR 280.10 (b). Section 2-1-1(b)~~(1) and~~ (7) through (15) are excluded from these UST regulations per C.R.S. § 8-20.5-101(17)(b).]

(c) ~~Deferred~~ Partially Excluded UST Systems

The following types of UST systems are deferred from all parts of these regulations except for ~~corrosion protection (2-2-1(a)) and~~ release response (Article 5) and financial responsibility (Article 7).

(1) Wastewater treatment tank systems not covered under 2-1-1(b)(2).

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

(3) Any UST system that is part of an emergency generator system at nuclear power generation facilities ~~regulated~~licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including but not limited to ~~under~~ 10 CFR Part 50~~, Appendix A~~.

(4) Aboveground storage tanks associated with ~~A~~airport hydrant fuel distribution systems.

(5) Aboveground storage tanks associated with UST systems with field-constructed tanks.

~~(d) Release detection deferrals. Subsection 2-3-4 (release detection requirements) does not apply to any UST system that stores fuel solely for use by emergency power generators.~~

(d) Installation Requirements for Partially Excluded UST Systems

(1) Owners and operators must install an UST system listed in 2-1-1(c) (1), (2), or (3) storing regulated substances (whether of single- or double- wall construction) that meets the following requirements:

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

(b) 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

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

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

[Note: The following codes of practice may be used as guidance for complying with this section:

(A) NACE International Standard Practice SP 0285, “External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection”;

(B) NACE International Standard Practice SP 0169, “Control of External Corrosion on Underground or Submerged Metallic Piping Systems”;

(C) American Petroleum Institute Recommended Practice 1632, “Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems”; or

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

~~(e) Requirements for Secondary Containment. Secondary containment requirements apply to new or replaced underground tanks and piping regulated under C.R.S. §8-20.5-101 except those excluded by regulation at 7 C.C.R. 1101-14 §2-1-1(b) and those deferred by regulation at 7 C.C.R. 1101-14 §2-1-1(c). New or replaced underground tanks and piping used for emergency power generation [deferred from release detection by 7 C.C.R. 1101-14 §2-1-1(d)] must meet these requirements. These requirements also apply to new motor fuel dispenser systems connected to UST systems.~~

2-1-2 Determination of Ownership and Use

An UST that was in use before December 22, 1988 and which was not closed in accordance with national fire codes in effect at the time is considered to be in use until it is permanently closed in accordance with these regulations. An UST that is in use on or after December 22, 1988 is considered to be in use until it is permanently closed in accordance with these regulations.

Section 2-2 UST Design, Construction, Installation and Registration

2-2-1 Design and Performance standards for new and replaced UST systems

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners/operators of new and replaced UST systems must meet the following requirements.

(a) Tanks. Secondary containment and interstitial monitoring is required for all new underground tank installations. Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. If an existing underground tank is replaced, the secondary containment and interstitial monitoring requirements apply only to the replaced underground tank. The secondary containment requirements do not apply to repairs meant to restore an underground tank to operating condition. Each tank must be properly designed and constructed, and any portion of an underground tank that routinely contains product must be protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below.

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

[Note: The following ~~industry~~ codes of practice may be used to comply with paragraph (a)(1) of this section:

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

(B) Underwriter's Laboratories of Canada ~~CAN4-~~S615~~-M83~~, "Standard for Reinforced Plastic Underground Tanks for ~~Petroleum Products~~Flamable and Combustible Liquids".~~;~~ ~~or American Society of Testing and Materials Standard D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."~~]

(2) The tank is constructed of steel and cathodically protected in the following manner:

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

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

(iii) Impressed current systems are designed to allow determination of current operating status as required in 2-3-3(b); and

(iv) Cathodic protection systems are operated and maintained in accordance with 2-3-3(a); or

[Note: The following codes ~~and standards~~of practice may be used to comply with paragraph (a)(2) of this section:

(A) Steel Tank Institute "sti-P3 Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks ~~Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks~~";

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

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

(D) ~~National Association of Corrosion Engineers~~ NACE International Standard Practice SP 0285~~ RP-02-85,~~ "~~Control of~~ External Corrosion Control ~~on Metallic Buried, Partially Buried, or Submerged Liquid~~of Underground Storage Systems by Cathodic Protection," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."]

(3) The tank is constructed of ~~a~~ steel~~-fiberglass-reinforced-plastic composite~~and clad or jacketed with a non-corrodible material; or

[Note: The following ~~industry~~ codes of practice may be used to comply with paragraph (a)(3) of this section:

(A) Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks,"

(B) ~~-or the Association for Composite Tanks~~Steel Tank Institute ACT-100® Specification F894, "Specification for External Corrosion Protection ~~the Fabrication~~ of FRP Composite~~Clad~~ Steel Underground Storage Tanks."

(C) Steel Tank Institute ACT-100-U® Specification F961, "Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks"; or

~~(A)~~(D) Steel Tank Institute Specification F922, "Steel Tank Institute Specification for Permatank®".]

(4) The tank is constructed of metal without additional corrosion protection measures provided that:

(i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and

[Note: The National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used as guidance for complying with paragraph (4)(i) of this section.]

(ii) Owners/operators maintain records that demonstrate compliance with the requirements of paragraph (a)(4)(i) of this section for the remaining life of the tank; or

(5) The tank construction and corrosion protection are determined by the Director to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a)(1) through (4) of this section.

(b) Piping. Secondary containment and interstitial monitoring is required for all new piping installations, including piping to remote fills. Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. For replaced piping, secondary containment and interstitial monitoring is required for the total length of piping connected to a single UST whenever more than 50% or 50 feet (whichever is less) of the piping connected to that tank is replaced. Installation of new or replaced piping will require the installation of containment sumps (under-dispenser [UDC], submersible turbine pump [STP] or transition) on both ends of the secondarily contained pipe for interstitial monitoring. These secondary containment requirements do not apply to repairs meant to restore piping to operating condition. For the purposes of determining when secondary containment is required by these rules, a repair is any activity that does not meet the definition of "replace". These secondary containment requirements also do not apply to vent piping, vapor recovery piping, and fill pipes not connected to remote fills.

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

(1) The piping is constructed of ~~fiberglass-reinforced plastic~~non-corrodible material; or

[Note: The following codes and standards may be used to comply with paragraph (b)(1) of this section:

(A) Underwriters Laboratories ~~Subject~~Standard 971, "~~UL Listed Non-Metal Pipe~~ Nonmetallic Underground Piping for Flammable Liquids"; or

(B) Underwriters Laboratories of Canada Standard ~~567~~S660, "~~Pipe Connectors~~ Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids~~and LP Gas~~"~~;~~.

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

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

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

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

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

(iii) Impressed current systems are designed to allow determination of current operating status as required in 2-3-3(b); and

(iv) Cathodic protection systems are operated and maintained in accordance with 2-3-3(a); or

[Note: The following codes and standards may be used to comply with paragraph (b)(2) of this section:

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

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

~~(C)~~ American Petroleum Institute ~~Publication~~Rec~~c~~ommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"~~; and~~

(B) Underwriters Laboratories Subject 971A, “Outline of Investigation for Metallic Underground Fuel Pipe”;

(C) Steel Tank Institute Recommended Practice R892, “Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems”;

(D) ~~National Association of Corrosion Engineers~~ NACE International Standard ~~RP-01-69~~Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems."; or

(E) NACE International Standard Practice SP 0285, “External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection”.]

(3) The piping is constructed of metal without additional corrosion protection measures provided that:

(i) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(ii) Owners/operators maintain records that demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section for the remaining life of the piping; or

~~[Note: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; and National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems," may be used to comply with paragraph (b)(3) of this section.]~~

(4) The piping ~~is~~ construction and corrosion protection are determined by the Director to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (b)(1) through (3) of this section.

(c) Spill and overfill prevention equipment.

(1) Except as provided in paragraphs (c)(2) and (c)(3) of this section, to prevent spilling and overfilling associated with product transfer to the UST system, owners/operators must use the following spill and overfill prevention equipment:

(i) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (e.g., a spill catchment basin); and

(ii) Overfill prevention equipment that will:

(A) Automatically shut off flow into the tank when the tank is more than 95 percent full; or

(B) Alert the transfer operator when the tank is more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm.

(2) Owners/operators are not required to use the spill and overfill prevention equipment specified in paragraph (c)(1) of this section if:

(i) Alternative equipment is used that is determined by the Director to be no less protective of human health and the environment than the equipment specified in paragraph (c)(1)(i) or (ii) of this section; or

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

(3) Flow restrictors used in vent lines may not be used to comply with paragraph (c)(1)(ii) of this section when overfill prevention is installed or replaced after January 1, 2017.

(4) Spill and overfill prevention equipment must be periodically tested or inspected in accordance with Section 2-3-5.

(d) Dispensers.

(1) Under-dispenser containment shall be required for all new motor fuel dispenser systems. A motor fuel dispenser system is considered new when:

(i) A dispenser is installed at a location where there previously was no dispenser (new UST system or new dispenser location at an existing UST system);

(ii) An existing dispenser is removed and replaced with another dispenser and the equipment used to connect the dispenser to the UST system is replaced at any point below the fire valve. This equipment may include check valves, shear valves, unburied flexible connectors or risers or other transitional components that are beneath the dispenser and connect the dispenser to the piping; or

(iii) An existing dispenser is removed and replaced with another dispenser and the dispenser island has to be modified (i.e., concrete is broken) to install the dispenser.

(2) Under-dispenser containment must be liquid-tight on its sides, bottom, and at any penetrations. Under-dispenser containment must allow for visual inspection and access to the components in the containment system or be periodically monitored for leaks from the dispenser system.

(3) Under-dispenser containment shall not be required when an existing dispenser is removed and replaced with another dispenser that is not considered a new dispenser.

(e) Minimum Secondary Containment Requirements. At a minimum, secondary containment systems must be designed, constructed, and installed to:

(1) Contain regulated substances released from the tank system until they are detected and removed. To meet this requirement, all secondary containment systems, including containment sumps, shall be tested for leaks at the time of installation and within 30 calendar days of a year thereafter using a testing method listed by the National Workgroup on Leak Detection Evaluations (NWGLDE) or an alternate testing method approved by the Director.

(2) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system. Routine testing of the secondary containment system is not required. However, if free product is detected in a containment sump, the sump shall be tested at that time for leaks using a testing method listed by the NWGLDE or an alternate test method approved by the Director.

(3) Be checked for evidence of a release at least every 30 calendar days.

(4) Include interstitial monitoring that meets the requirements of 7 C.C.R. 1101-14 §2-3-4-2(g). If interstitial monitoring is the sole method of release detection for the UST system, sump sensors shall be installed and each sensor shall be tested for functionality by manual tripping on an annual basis.

(f) Compatibility.

(1) Owners/operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST.

(2) Owners and operators must notify the implementing agency at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substance identified by the implementing agency. In addition, owners and operators with UST systems storing these regulated substances must meet one of the following:

(i) 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 may demonstrate compatibility of the UST system by using one of the following options:

(A) Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored; or

(B) Equipment or component manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

(C) Use another option determined by the implementing agency to be no less protective of human health and the environment than the options listed in paragraphs (A) or (B) of this section.

(3) Owners and operators must maintain records in accordance with Section 2-3-7(b) documenting compliance with paragraph (i) of this section for as long as the UST system is used to store the regulated substance.

[Note: Owners/operators storing alcohol blends may use the following codes to comply with the requirements of this section:

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

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

2-2-2 Installation

No person may install, or cause to be installed, a new or replacement UST system or facility until:

(a) An application, as described in 2-2-2-1 has been approved by the Director and an installation permit has been issued by the Director;

(b) The installation plan has been reported to the local Fire Department having jurisdiction; and

(c) The application/inspection fee described in 2-2-2-1(c) has been paid.

2-2-2-1 Installation Application

The Director will make available an application form to facilitate submission of required information. A complete installation application must be received by the Director no less than 20 working days prior to construction. The application must be approved before beginning construction:

(a) On any new UST system used to store regulated substances.

(b) On an UST system that is being upgraded to the standards described in these regulations or applicable statutes.

(c) For each UST installation or upgrade construction plan submitted, the owner/operator must remit a fee of one hundred fifty ($150) dollars to the Director to cover the costs of the site plan review and installation inspection.

(d) Denial, Revocation, or Modification of Permit.

(1) An UST permit application may be denied if the UST installation or operation is not in conformance with these regulations; or is not in conformance with both Code 30 and Code 30-A of the National Fire Protection Association.

(2) An UST permit application may be denied if the permit application is not complete or is determined to be inaccurate.

(3) An UST installation permit may be revoked if the UST installation or operation is not in conformance with these regulations or is not in conformance with either Code 30 or Code 30-A of the National Fire Protection Association. If installation activities have not begun within six months of the issuance of the UST installation permit, the UST installation permit will be automatically revoked unless the Director grants an extension in writing.

(4) Six months or later after an UST installation permit is issued, the permit may be modified by subsequent statutory or regulatory changes.

2-2-2-2 Installation Requirements

(a) Installation. ~~All tanks and piping~~The UST system must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

[Note: Tank and piping system installation practices and procedures described in the following codes may be used to comply with the requirements of paragraph (a) of this section:

(~~1~~A) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; ~~or~~

(~~2~~B) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(~~3~~C) ~~American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System.~~National Fire Protection Association Standard 30, “Flammable and Combustible Liquids Code” and Standard 30A, “Code for Motor Fuel Dispensing Facilities and Repair Garages.”]

(b) Effective January 1, 2009 all tanks and piping must be properly installed by an installer certified by the Director. To obtain certification from the Director, applicants shall submit a completed Installer Certification Application with a copy of a current certificate issued by the International Code Council (ICC) indicating he or she has passed the ICC UST Installation/Retrofitting examination,

or the installer has been certified by the tank and piping manufacturers, or the installer provides certification documentation from other states that have equivalent certification requirements.

(c) Certification of installation. All owners/operators must demonstrate compliance with paragraph (a) of this section by providing a certification of compliance on the UST registration form in accordance with 2-2-3.

2-2-2-3 Installation Inspection

The Director will inspect the UST system before completion of installation activities to verify the requirements of Section 2-2 are being met.

(a) The owner/operator shall provide the Director with a 72 hour notice prior to the time of inspection. ~~This inspection will be as detailed as practicable; but does not exempt the owner/operator from certifying that the installation was made according to all the technical requirements of these regulations.~~

(b) Any duly authorized agent or employee of the Director shall have authority to enter in or upon the premises of any facility that contains an UST system, containing a regulated substance, for the purpose of verifying that such UST system and its required records are in compliance with these regulations.

2-2-3 UST System Registration

(a) Each owner/operator of a regulated UST system must register each UST system with the Director within 30 calendar days after the first day on which the system is actually used to contain a regulated substance. This registration must be renewed annually, on or before the calendar date of the initial registration, in each succeeding year after 1989. The owner/operator is required to pay a registration fee as set by statute for each tank registered.

(b) All regulated UST systems and facilities must be registered on a form provided by the Director, regardless of use, size, or type of regulated substance stored therein; and regardless of whether the tanks and facilities are in service or in temporary closure.

[Note: Owners/operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the Colorado Department of Health in accordance with the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, on a form published by EPA on November 8, 1985 (50 FR 46602) unless notice was given pursuant to ~~s~~Section 103(c) of CERCLA. Owners/operators who have not complied with the notification requirements may use the registration form described in 2-2-3(b)]

(c) Owners required to register tanks under paragraph (a) of this section must register each tank they own. Owners may register several tanks using one registration form, but owners who own tanks located at more than one place of operation must file a separate registration form for each separate place of operation.

(d) Any time there is a change in operation, including upgrading of the UST system, changes in operation including a change of owner or operator, or completed closure of an UST system, the owner/operator is required to submit an updated registration within 30 calendar days.

(e) Registration forms required to be submitted under (a) and (d) of this section must provide all of the required information for each tank.

(f) All owners/operators of new UST systems must certify in the registration form, compliance with the following requirements:

(1) Installation of tanks and piping under 2-2-2-2(a);

(2) Cathodic protection of steel tanks and piping under 2-2-1(a)(2);

(3) Financial responsibility under Article 7 of these regulations; and

(4) Release detection under 2-3-4.

(g) All owners/operators of new UST systems must certify in the registration form that the method used to install the UST system complies with the requirements in ~~s~~Section 2-2-2-2(a).

(h) After July 1, 1989, any person who sells a tank intended to be used as an UST must notify the purchaser of such tank of the owner's registration obligations under (a) of this section.

(i) The registration form supplied by the Director will meet the requirements of ~~s~~Section 9002 of the federal Solid Waste Disposal Act as amended.

(j) The required fee for UST registration is $35.00 per tank per year as authorized by C.R.S. § 8-20.5-102; and the fee for the installation plan review and the installation inspection is set at $150.00, as authorized by C.R.S. § 8-20.5-204, to cover the costs of administering this section.

2-2-4 Upgrading existing UST System

Owners and operators must permanently close (in accordance with Section 2-4) any UST system that does not meet the new UST system performance standards in Section 2-2 or has not been upgraded in accordance with paragraphs (b) through (d) of this section. This does not apply to previously deferred UST systems described in Section 2-1-1-(a)(1) of this section and where an upgrade is determined to be appropriate by the implementing agency.

(a) Alternatives allowed. ~~Not later than December 22, 1998, a~~All existing UST systems must comply with one of the following:

(1) New UST system performance standards under S~~s~~ection 2-2-1; or

(2) Upgrading requirements in (b) through (d) of this section; or

(3) Closure requirements under S~~s~~ection 2-4 of these regulations, including applicable requirements for corrective action under Article 5.

(b) Tank upgrading requirements. Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

(1) Internal lining. A tank may be upgraded by internal lining if:

(i) The lining is installed in accordance with the requirements of S~~s~~ection 2-2-5, and

(ii) Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications. If the internal lining is no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, then the lined tank must be permanently closed in accordance with Section 2-4.

(2) Cathodic protection. ~~A tank may be~~ Tanks upgraded by cathodic protection ~~if the cathodic protection system~~ must meet~~s~~ the requirements of S~~s~~ection 2-2-1(a)(2) and the integrity of the tank ~~is~~must have been ensured using one of the following methods:

(i) The tank ~~is~~was internally inspected and assessed to ensure that the tank ~~is~~was structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

(ii) The tank ~~has~~had been installed for less than 10 years and is monitored monthly for releases in accordance with S~~s~~ection 2-3-4-2(~~c~~d) through (~~h~~i); or

(iii) The tank ~~has~~had been installed for less than 10 years and ~~is~~was assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of S~~s~~ection 2-3-4-2(c). The first tightness test must have been conducted prior to installing the cathodic protection system. The second tightness test must have been conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or

(iv) The tank ~~is~~was assessed for corrosion holes by a method that is determined by the Director to prevent releases in a manner that is no less protective of human health and the environment than (b)(2)(i) through (iii) of this section.

(3) Internal lining combined with cathodic protection. ~~A tank may be~~Tanks upgraded by both internal lining and cathodic protection ~~if~~must meet the following:

(i) The lining ~~is~~was installed in accordance with the requirements of S~~s~~ection 2-2-5; and

(ii) The cathodic protection system meets the requirements of S~~s~~ection 2-2-1(a)(2).

[Note: The following historical codes ~~and standards may be used to~~of practice were listed as options for complying with this section:

(A) American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

(B) National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection";

(C) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

(D) American Petroleum Institute ~~Publication~~Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."]

(c) Piping upgrading requirements. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of S~~s~~ection 2-2-1(b)(2).

[Note: The codes and standards listed in the note following S~~s~~ection 2-2-4(b)(3)(ii) may be used to comply with this requirement.]

(d) Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in S~~s~~ection 2-2-1(c).

2-2-5 Repairs

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

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

[Note: The following codes and standards may be used to comply with paragraph (a) of this section:

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

(B) American Petroleum Institute ~~Publication~~Recommended Practice 2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines";

(C) American Petroleum Institute ~~Publication~~Recommended Practice RP 1631, "~~Recommended Practice for the~~ Interior Lining ~~of Existing Steel~~and Periodic Inspection of Underground Storage Tanks"; ~~and~~

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

(E) National Leak Prevention Association Standard 631, ~~"Spill Prevention, Minimum 10 Year Life Extension of Existing Steel~~Chapter A, "Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks~~ by Lining Without the Addition of Cathodic Protection~~.",

(F) Steel Tank Institute Recommended Practice R972, "Recommended Practice for the Addition of Supplemental Anodes to STI-P3® Tanks",

(G) NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection.", or

~~(A)~~(H) Fiberglass Tank and Pipe Institute Recommended Practice T-95-02, "Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks".]

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

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

(d) If a release of regulated substance is identified during repairs to UST system equipment, the owner/operator shall report the release according to Article 4.

(e) Post-repair testing

(1) Repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps used for interstitial monitoring of piping must have the secondary containment tested for tightness according to the manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or according to requirements established by the implementing agency within 30 days following the date of completion of the repair. All other repairs to ~~Repaired~~

tanks and piping must be tightness tested in accordance with 2-3-4-2(c) and 2-3-4-3 within 30 calendar days following the date of the completion of the repair unless:

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

(ii) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in S~~s~~ection 2-3-4-2(d) through (~~h~~i); or

(iii) Another test method is used that is determined by the Director to be no less protective of human health and the environment than those listed above.

[Note: The following codes of practice may be used to comply with paragraph (e)(1) of this section:

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

(B) Fiberglass Tank and Pipe Institute Protocol, "Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks with Dry Annular Space"; or

(C) Petroleum Equipment Institute Recommended Practice RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".]

(2) Within 6 months following the repair of any cathodically protected UST system the cathodic protection system must be tested in accordance with S~~s~~ection 2-3-3(a) and (b) to ensure that it is operating properly.

(3) Within 30 days following any repair to spill or overfill prevention equipment, the repaired spill or overfill prevention equipment must be tested or inspected, as appropriate, in accordance with Section 2-2-5(e)(3) to ensure it is operating properly.

Section 2-3 Operation

2-3-1 Operator Training

UST Operator Training is a requirement designed to ensure knowledge regarding operating and maintaining UST systems. These requirements apply to UST systems regulated under Subtitle I, except those excluded by these regulations.

2-3-1-1 Classes of Operators

For purposes of implementing the operator training requirements, these regulations establish Colorado specific operator training, testing and certification requirements for three classes of operators identified as Class A, Class B, and Class C. Owners/operators are required to identify and designate, for each UST system or group of UST systems at a facility, at least one named individual for each class of operator outlined in these regulations. All individuals designated as a Class A, B, or C operator must, at a minimum, be trained and certified according to these regulations by December 31, 2009.

Separate individuals may be designated for each class of operator described above or an individual may be designated to more than one of the above operator classes. An individual who is designated to more than one operator class must be trained in each operator class for which he or she is designated. Because an individual may be designated for more than one operator class, the Director will allow a training approach that encompasses training for more than one operator class.

To assist in identifying responsible individuals to be trained pursuant to these regulations, the following sections characterize, in general terms, each class of operator. These sections also identify general training requirements pertaining to operating and maintaining UST systems.

2-3-1-2 Class A Operator

A Class A operator has primary responsibility to operate and maintain the UST system. The Class A operator's responsibilities include managing resources and personnel, such as establishing work assignments, to achieve and maintain compliance with regulatory requirements. The general and minimum requirements for a Class A operator are as follows:

(a) General Requirements: This individual focuses on the broader aspects of the statutory and regulatory requirements and standards necessary to operate and maintain the UST system. For example, this individual typically ensures that appropriate individual(s):

(1) Properly operate and maintain the UST system.

(2) Maintain appropriate records.

(3) Are trained to operate and maintain the UST system and keep records.

(4) Properly respond to emergencies caused by releases or spills from UST systems at the facility.

(5) Make financial responsibility documents available to the Director as required.

(b) Minimum Requirements: The Class A operator must be trained in the following:

(1) A general knowledge of UST system requirements so he or she can make informed decisions regarding compliance and ensure appropriate individuals are fulfilling operation, maintenance, and recordkeeping requirements and standards of these regulations regarding:

(i) Spill prevention

(ii) Overfill prevention

(iii) Release detection

(iv) Corrosion protection

(v) Emergency response

(vi) Product compatibility

(2) Financial responsibility documentation requirements.

(3) Notification requirements.

(4) Release and suspected release reporting.

(5) Temporary and permanent closure requirements.

(6) Class B and C operator training requirements.

2-3-1-3 Class B Operator

A Class B operator implements applicable UST regulatory requirements and standards in the field. This individual implements day-to-day aspects of operating, maintaining, and recordkeeping for USTs at one or more facilities. The general and minimum requirements for a Class B operator are as follows:

(a) General Requirements: This individual typically monitors, maintains, and ensures:

(1) Release detection method, recordkeeping, and reporting requirements are met.

(2) Release prevention equipment, recordkeeping, and reporting requirements are met.

(3) All relevant equipment complies with performance standards.

(4) Appropriate individuals are trained to properly respond to emergencies caused by releases or spills from UST systems at the facility.

(b) Minimum Requirements: Compared with training for the Class A operator, training for the Class B operator will provide a more in-depth understanding of operation and maintenance aspects, but may cover a more narrow breadth of applicable regulatory requirements. The Class B operators training must encompass the following:

(1) Components of UST systems.

(2) Materials of UST system components.

(3) Methods of release detection and release prevention applied to UST components.

(4) Operation and maintenance requirements of these regulations that apply to UST systems and include:

(i) Spill prevention

(ii) Overfill prevention

(iii) Release detection

(iv) Corrosion protection

(v) Emergency response

(vi) Product compatibility

(5) Reporting and recordkeeping requirements.

(6) Class C operator training requirements.

2-3-1-4 Class C Operator

A Class C operator is an employee and is, generally, the first line of response to events indicating emergency conditions. This individual is responsible for responding to alarms or other indications of emergencies caused by spills or releases from UST systems. This individual notifies the Class B or Class A operator and appropriate emergency responders when necessary. It is not necessary that all employees of the facility are Class C operators, although at least one Class C Operator must be present during operating hours at attended facilities.

(a) General Requirements: This individual typically:

(1) Controls or monitors the dispensing or sale of regulated substances, or

(2) Is responsible for initial response to alarms or releases.

(b) Minimum Requirements: At a minimum, the Class C operator must be trained to:

(1) Take action in response to emergencies (such as, situations posing an immediate danger or threat to the public or to the environment and that require immediate action) or alarms caused by spills or releases from an UST system.

2-3-1-5 Acceptable Training and Certification Processes

Operator training must evaluate operator knowledge of the minimum training requirements described for each class of operator in S~~s~~ection 2-3-1(2), (3) and (4). The following is a list of acceptable approaches to meet training requirements stated in these regulations**:**

(a) Possession of a current certificate issued by the International Code Council (ICC) indicating he or she has passed the Colorado UST System Class A or B Operator exam.

(b) For Class C operator training, possession of a current certificate issued by the owner indicating that he or she has successfully completed training conducted by a certified Class A or Class B operator.

(c) An operator training program that has received prior approval from the Director. The program may include in-class, on-line, or hands-on training. Such a program must include an evaluation of operator knowledge through testing, practical demonstration, or other tools determined as acceptable by the state.

(d) To address operators responsible for UST systems in multiple states, the Director may accept operator training certification verification from other states that have equivalent operator training requirements.

2-3-1-6 Training and Certification Deadlines and Schedules

(a) Effective January 1, 2010, designated Class A and B operators shall be trained and possess a current certificate issued by a Director-approved trainer indicating he or she has passed the Colorado UST System Class A or B operator exam.

(b) Effective January 1, 2010, designated Class C operators shall be trained and possess a current certificate issued by a Class A or B operator that developed or conducted the training.

(c) By January 1, 2010, owners of UST systems shall submit a signed statement to the Director indicating that the owner understands and is in compliance with all applicable UST requirements, and identifying the designated Class A or B operator(s) for each facility owned. The owner shall inform the Director of any change of designated Class A or B operator(s) no later than 30 calendar days after the change. Documentation identifying the designated Class C operators shall be maintained on site.

(d) After January 1, 2010 new operators shall be trained within the following timeframes:

(1) Class A and Class B operators must be trained within 30 calendar days after assuming full operation and maintenance responsibilities at the UST system.

(2) Class C operators must be trained before assuming full responsibility for responding to emergencies.

2-3-1-7 Retraining Requirements

If the Director determines an UST system is out of compliance, the Class A and/or Class B operator must be retrained and recertified within 90 calendar days. At a minimum, an UST system is out of compliance if the system:

(a) Meets any of the delivery prohibition criteria outlined in Section 6-2, or

(b) Is not in significant compliance with other requirements, such as temporary or permanent closure, tank registration or financial responsibility.

2-3-1-8 Documentation

Owners and operators of underground storage tank systems must maintain a list of designated Class A, Class B, and Class C operators and maintain records verifying that training and retraining, as applicable, have been completed, in accordance with 2-3-7 as follows:

(a) The list must:

(1) Identify all Class A, Class B, and Class C operators currently designated for the facility; and

(2) Include names, class of operator trained, date assumed duties, date each completed initial training, and any retraining.

(b) Records verifying completion of training or retraining must be a paper or electronic record for Class A, Class B, and Class C operators. The records, at a minimum, must identify name of trainee, date trained, operator training class completed, and list the name of the trainer or examiner and the training company name, address, and telephone number. Owners and operators must maintain these records for as long as Class A, Class B, and Class C operators are designated. The following requirements also apply to the following types of training:

(1) Records from classroom or field training programs (including Class C operator training provided by the Class A or Class B operator) or a comparable examination must, at a minimum, be signed by the trainer or examiner;

(2) Records from computer based training must, at a minimum, indicate the name of the training program and web address, if Internet based; and

(3) Records of retraining must include those areas on which the Class A or Class B operator has been retrained.

2-3-2 Spill and Overfill Prevention

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

(b) The owner/operator must report, investigate, and clean up any spills and overfills in accordance with Articles 4 and 5.

(c) Owners/operators must maintain spill and overfill equipment according to Ssection 2-2-1(c).

[Note: The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with this section. Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."]

2-3-3 Corrosion Protection

All owners/operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances or permanently closed in accordance with Section 2-4-2.

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

(1) Frequency. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the Director; and

(2) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

[Note: National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used to comply with paragraph (a)(2) of this section.]

(b) UST systems with impressed current cathodic protection systems must also be inspected every 60 calendar days to ensure that the equipment is running properly.

(c) Where internal lining was installed to satisfy corrosion protection requirements, the tank must meet the requirements listed in 2-2-4(b).

2-3-4 Release Detection

2-3-4-1 General requirements for all UST systems

(a) Owners/operators of ~~new and existing~~ UST systems that contain a regulated substance or hazardous substance must provide a method, or combination of methods, of release detection that:

(1) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition. Beginning on January 1, 2020, electronic and mechanical components must be tested for proper operation, in accordance with one of the following: manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the implementing agency to be no less protective of human health and the environment than the two options listed above. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:

(i) Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup;

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

(iii) Automatic line leak detector: test operation to meet criteria in 2-3-4-3(a)(1) by simulating a leak;

(iv) Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and

(v) Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

[Note: The following code of practice may be used to comply with paragraph (a)(2) of this section: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".]

, and

(3) Meets the performance requirements in 2-3-4-2, ~~and~~ 2-3-4-3 or 2-5 as applicable, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods ~~used after December 22, 1991 except for methods permanently installed prior to that date,~~ must be capable of detecting the leak rate or quantity specified for that method in 2-3-4-2(b), (c), ~~and~~ (d), (h), or (i), ~~or~~ 2-3-4-3(a)(1) or (2), or 2-5 with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(b) When a release detection method operated in accordance with the performance standards in 2-3-4-2, ~~and~~ 2-3-4-3 or 2-5 indicates a release may have occurred, owners/operators must notify the Director in accordance with Article 4.

~~(c) Owners/operators of all UST systems must have complied with the release detection requirements of 2-3-4 by December 22, of the year listed in the following table:~~

~~Schedule for Phase-in of Release Detection~~					
~~**Year System Was Installed**~~	~~**Year When Release Detection is Required (by December 22 of the year indicated)**~~				
	~~**1989**~~	~~**1990**~~	~~**1991**~~	~~**1992**~~	~~**1993**~~
~~Before 1965 or date unknown~~	~~RD~~	~~PP~~			
~~1965 - 1969~~		~~PP/RD~~			
~~1970 - 1974~~		~~PP~~	~~RD~~		
~~1975 - 1979~~		~~PP~~		~~RD~~	
~~1980 - 1988~~		~~PP~~			~~RD~~
~~New UST~~	~~PP/RD Immediately upon installation~~				

~~PP = Must have begun release detection for all pressurized piping in accordance with 2-3-4-3(a) and 2-3-4-4(b)(4).~~

~~RD = Must have begun release detection for tanks and suction piping in accordance with 2-3-4-2, 2-3-4-3(b) and 2-3-4-4.~~

(~~d~~c) Any existing UST system that does not apply a method of release detection that complies with the requirements of this section must complete the closure procedures in 2-4 immediately. For previously deferred UST systems described in Sections 2-1 and 2-5, this requirement applies after the effective dates described in 2-1-1(a)(1)(ii) and (iii) and Section 2-5-2(a).

2-3-4-2 Requirements for regulated substance UST~~s~~ Systems

Owners/operators of UST system must provide release detection for tanks at least every 30 calendar days or as otherwise specified in these regulations. The methods that satisfy release detection requirements are listed below:

(a) Inventory Control.

(1) Product inventory control can be used as the sole method for release detection:

(i) Until 10 years after the tank is installed or upgraded according to 2-2-4, and

(ii) If tank tightness testing as described in (c) of this section is performed at least every 5 years after the tank is installed or upgraded.

(2) Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

(i) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

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

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

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

(v) Product dispensing is metered and recorded within an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

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

[Note: Practices described in the American Petroleum Institute ~~Publication 1621,~~ "Recommended Practice RP 1621 for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this subsection.]

(b) Manual tank gauging.

(1) Manual tank gauging may be used as the sole method of release detection:

(i) For the life of a tank that has a nominal capacities of 1,000 gallons or less that meet the tank diameter criteria in the table in paragraph (3)(iv) of this section, or

(ii) For a tank with a nominal capacity of 1,001 to 2,000 gallons:

(A) Until 10 years after the tank is installed or upgraded according to 2-2-4, and

(B) If tank tightness testing as described in (c) of this section is performed at least every 5 years after the tank is installed or upgraded.

(2) For tanks of greater than 2,000 gallons nominal capacity, manual tank gauging may not be used to satisfy release detection requirements of this section.

(3) Manual tank gauging must meet the following requirements:

(i) Tank liquid level measurements are taken at the beginning and ending of a period ~~of at least 36 hours~~ using the appropriate minimum duration of test value in the table below during which no liquid is added to or removed from the tank;

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

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

(iv) A ~~leak~~release is suspected and subject to the requirements of Article 4 if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity (Gallons)	Tank Dimensions	Weekly Standard 1 Test (Gallons)	Monthly Standard Average of 4 Tests (Gallons)	Minimum Rest Period Duration
Up to 550	N/A	10	5	36 hours
551-1,000	64" diameter	9	4	44 hours
551-1,000	48" (diameter	12	6	58 hours
551-1,000 (also requires periodic tank tightness testing)	N/A	13	7	36 hours
1,000	64" (diameter) x 73" (length)	9	4	44 hours
1,000	48" (diameter) x 128" (length)	12	6	58 hours
1,001 - 2,000 (also requires periodic tank tightness testing)	N/A	26	13	36 hours

(c) Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate, with a probability of detection of 0.95, from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

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

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

(2) The automatic tank gauging equipment must meet the ~~i~~inventory control (or ~~an~~other test of equivalent performance) ~~is conducted in accordance with the~~ requirements of (a) of this section~~.~~; and

(3) The test must be performed with the system operating in one of the following modes:

(i) In-tank static testing conducted at least once every 30 days; or

(ii) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

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

(1) The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

(2) The stored regulated substance, or a tracer compound placed in the UST system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

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

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

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

(6) In the UST excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (e)(1)-through (4) of this section and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

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

(f) Groundwater monitoring. Testing or monitoring for liquids on the groundwater must meet the following requirements:

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

(2) Groundwater is never more than 20 vertical feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

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

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

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

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

(7) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (f)(1)-(5) of this section and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

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

(g) Interstitial monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed

and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

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

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

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

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

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (not more than 0.000001 cm/sec for the regulated substance stored) to direct a ~~release~~leak to the monitoring point and permit its detection;

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

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

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

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

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

(h) Statistical inventory reconciliation: Release detection methods based on the application of statistical principles to inventory data similar to those described in 2-3-4-2(a) must meet the following requirements:

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

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

(3) Use a threshold that does not exceed one-half the minimum detectible leak rate.

(~~h~~i) Other methods. Any other type of release detection method, or combination of methods, can be used if:

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

(2) The Director may approve another method if the owner/operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (c)-(h) of this section. In comparing methods, the Director shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner/operator must comply with any conditions imposed by the Director on its use to ensure the protection of human health and the environment.

2-3-4-3 Requirements for Piping

Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

(a) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

(1) Be equipped with automatic line leak detectors which alert the owner/operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with ~~the manufacturer's requirements~~Section 2-3-4-1(a)(2); and

(2) Conduct periodic line release detection which will consist of:

(i) An annual test of piping that can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure; or

(ii) An applicable tank method conducted on a monthly basis. Except as described in 2-3-4-2(a), (b), and (c), any of the methods in 2-3-4-2(e)~~-~~through(~~h~~i) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances. Automatic tank gauges (ATG) as described in ~~subsection~~ Subsection 2-3-4-2(d) may be considered an applicable tank method to be used for release detection on lines if the ATG is connected to equipment that allows the capability for this type of monitoring.

(b) Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least once every 3 years and in accordance with 2-3-4-3 (a)(2)(i), or use a monthly monitoring method conducted in accordance with 2-3-4-3(a)(2)(ii). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(1) The below-grade piping operates at less than atmospheric pressure;

(2) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(3) Only one check valve is included in each suction line;

(4) The check valve is located directly below and as close as practical to the suction pump; and

(5) A method is provided that allows compliance with paragraphs (b)(1) – (4) of this section to be readily determined.

2-3-4-4 Requirements for hazardous substance UST systems

Owners/operators of hazardous substance UST systems must provide ~~release detection~~containment that meets the following requirements and monitor these systems using 2-3-4-2(g) at least every 30 days:

~~(a) Release detection at existing UST systems must meet the requirements for regulated substance UST systems in 2-3-4-2. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new UST systems in paragraph (b) of this section.~~

~~(b) Release detection at new hazardous substance UST systems must meet the following requirements:~~

(~~1~~a) Secondary containment systems must be designed, constructed and installed to:

(~~i~~1) Contain regulated substance~~s released~~ leaks from the ~~UST system~~primary containment until they are detected and removed;

(~~ii~~2) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(~~iii~~3) Be checked for evidence of a release at least every 30 calendar days.

[Note: The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements for tanks installed on or before January 1, 2017.]

(~~2~~b) Double-walled tanks must be designed, constructed, and installed to:

(~~i~~1) Contain a ~~release~~leak from any portion of the inner tank within the outer wall; and

(~~ii~~2) Detect the failure of the inner wall.

(~~3~~c) External liners (including vaults) must be designed, constructed, and installed to:

(~~i~~1) Contain 100 percent of the capacity of the largest tank within its boundary;

(~~ii~~2) Prevent the interference of precipitation or groundwater intrusion with the ability to contain or detect a release of regulated substances; and

(~~iii~~3) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

(~~4~~d) Underground piping must be equipped with secondary containment that satisfies the requirements of ~~paragraph (b)(1) of~~ this section (e.g., trench liners, ~~jacketing of~~ double-walled pipe). In addition, underground piping that conveys hazardous substances under pressure must be equipped with an automatic line leak detector in accordance with 2-3-4-3(a)(1).

(~~5~~e) For hazardous substance UST systems installed on or before January 1, 2017 ~~O~~other methods of release detection may be used if owners/operators:

(~~i~~1) Demonstrate to the Director that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in 2-3-4-2(b)-(~~h~~i) can detect a release of petroleum;

(~~ii~~2) Provide information to the Director on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(~~iii~~3) Obtain written approval from the Director to use the alternate release detection method before the installation and operation of the new UST system.

[Note: Pursuant to 40 CFR § 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under S~~s~~ections 102 and 1-03 of the Comprehensive Environmental Response,

Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.]

2-3-5 Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.

(a) Owners and operators of UST systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment:

(1) Spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following:

(i) The equipment is double walled and the integrity of both walls is periodically monitored at a frequency not less than the frequency of the compliance inspections described in 2-3-6. Owners and operators must begin meeting paragraph (a)(1)(ii) of this section and conduct a test within 30 days of discontinuing periodic monitoring of this equipment; or

(ii) The spill prevention equipment and containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the following criteria:

(A) Requirements developed by the manufacturer (Note: Owners and operators may use this option only if the manufacturer has developed requirements);

(B) Code of practice developed by a nationally recognized association or independent testing laboratory; or

(C) Requirements determined by the implementing agency to be no less protective of human health and the environment than the requirements listed in paragraphs (a)(1)(ii)(A) and (B) of this section.

(2) Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in 2-2-1(c) and will activate when regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in paragraph (a)(1)(ii)(A)-(C) of this section.

(b) Owners and operators must begin meeting these requirements as follows:

(1) For UST systems in use on or before January 1, 2017, the initial spill prevention equipment test, containment sump test and overfill prevention equipment inspection must be conducted not later than January 1, 2020; or

(2) For UST systems brought into use after January 1, 2017, these requirements apply at installation.

(c) Owners and operators must maintain records as follows (in accordance with 2-3-7) for spill prevention equipment, containment sumps used for interstitial monitoring of piping, and overfill prevention equipment:

(1) All records of testing or inspection must be maintained for three years; and

(2) For spill prevention equipment and containment sumps used for interstitial monitoring of piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

[Note: The following code of practice may be used to comply with paragraphs (a)(1)(ii) and (a)(2) of this section: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".]

2-3-~~5~~6 Compliance Inspections

This section describes the inspections required to be conducted by the owner or operator of the UST system, as well as periodic inspections completed by the Director.

2-3-~~5~~6-1 Monthly Compliance Inspections

(a) The designated Class A or B operator or a delegated designee shall perform monthly visual inspections of all UST systems for which they are designated. The results of each inspection shall be recorded on a monthly inspection checklist. The monthly visual inspection shall include the following:

(1) ~~Inspecting for the presence of any sensor alarm conditions, and responding to alarm conditions appropriately.~~ Check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present. Ensure records of release detection testing are reviewed and current.

(2) ~~Inspecting the integrity of the spill containment or manholes (cracks, holes, bulges etc), and for the presence of regulated substance, water, or debris in spill containers (fill and vapor recovery).~~ Visually check spill containment or manholes for damage (cracks, holes, bulges etc). Remove liquid or debris from spill containers (fill and vapor recovery). Check for and remove obstructions in the fill pipe. Check the fill cap to make sure it is securely on the fill pipe. For double-walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area.

(3) Inspect~~ing~~ hanging hardware on dispensers and/or other visible piping for the presence of regulated substance leakage.

(b) The designated operator(s) or delegated designee shall provide the owner or operator with a copy of each monthly inspection checklist, and alert the owner or operator of any condition discovered during the monthly visual inspection that may require follow-up actions.

(c) The owner or operator shall maintain a copy of the monthly inspection checklist and all attachments for the previous twelve months. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries. The records shall be made available for review to OPS upon request.

[Note: The following code of practice may be used to comply with this section: Petroleum Equipment Institute Recommended Practice RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems".]

2-3-~~5~~6-2 Annual Operational Compliance Inspections

(a) The designated Class A or B operator(s) shall perform an annual operational compliance inspection of all UST systems for which they are designated. The annual operational compliance inspection shall include, but is not limited to, the following:

(1) Compil~~ing~~e and review~~ing~~ monthly release detection, visual inspection and corrosion protection records from the prior twelve months.

(2) Compil~~ing~~e and review~~ing~~ the alarm history report or log for the prior twelve months, and checking that each alarm condition was documented and responded to appropriately, including the reporting of suspected or confirmed releases.

(3) Conduct~~ing~~ functionality testing on all line leak detectors, sump sensors and overfill prevention equipment in accordance with manufacturer's specifications to ensure proper installation and operation. Also check hand held release detection equipment such as tank gauge sticks or groundwater bailers for operability and serviceability.

(4) Conduct visual inspection of containment sumps. Check for damage, leaks to the containment area, or releases to the environment. Remove liquid (in contained sumps) or debris. For double-walled sumps with interstitial monitoring, check for a leak in the interstitial area.

(~~4~~5) Check~~ing~~ that all required testing and maintenance for the UST system ~~have~~ has been completed, and document~~ing~~ the dates these activities occurred.

(~~5~~6) Verify~~ing~~ that all designated Class C operators have been trained in accordance with 2-3-1-4 and 2-3-1-5 of these regulations.

(~~6~~7) Complete~~ing~~ an Annual Operational Compliance Inspection Report and Certification Form for each facility using forms provided by OPS.

(b) The designated Class A or B operator(s) shall provide the owner or operator with a copy of the annual operational compliance inspection report, and alert the owner or operator of any condition discovered during the annual compliance inspection that may require follow-up actions. The report must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries.

(c) The owner or operator shall submit a copy of the annual operational compliance inspection report and all attachments for the previous twelve months to OPS on an annual basis or within 60 calendar days of an OPS request for records.

2-3-~~5~~6-3 Inspections Conducted by the Director

(a) Any duly authorized agent or employee of the Director shall have authority to enter in or upon the premises of any facility that contains an UST system, containing a regulated substance, for the purpose of verifying that such UST system and its required records are in compliance with these regulations.

(b) Per CRS Section 8-20-223.5, the Director shall conduct an emission inspection of all USTs that are located in the geographical area designated by Regulation #7 of the Colorado Department of Public Health and Environment 5 C.C.R. 1001-9 and which contain petroleum distillate such as gasoline, to insure pollution control equipment is installed and is in operating condition.

2-3-~~6~~7 Reporting and Record Keeping

Owners/operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the Director, as well as requests from OPS for document submission, testing, and monitoring pursuant to S~~s~~ection 9005 of Subtitle I of the ~~Resource Conservation and Recovery~~Solid Waste Disposal Act, as amended.

(a) Reporting. Owners and operators must submit the following information to the implementing agency:

(1) Notification for all UST systems (Section 2-2-3), which includes certification of installation for new UST systems (Section 2-2-2-2) and notification when any person assumes ownership of an UST system (Section 2-2-3(d));

(2) Notification prior to UST systems switching to certain regulated substances (Section 2-2-1(f));

(3) Reports of all releases including suspected releases, spills, and overfills (Section 4-1), and confirmed releases (Section 4-3);

(4) Corrective actions planned or taken including initial abatement measures (Section 5-1-1), initial site characterization (Section 5-1-2), free product removal (Section 5-1-1), investigation of soil and groundwater cleanup (Section 5-2), and corrective action plan (Section 5-3); and

(5) A notification before permanent closure or change-in-service (Section 2-4).

(~~a~~b) Record keeping. Owners/operators must maintain the following information:

(1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used 2-2-1(a)(4) and (b)(3)).

(2) Documentation of operation of corrosion protection equipment as required in 2-2-1(a) and (b) and 2-2-3;

(i) The results of the last three 60-day inspections; and

(ii) The results from the last two system tests.

(3) Documentation of compatibility for UST systems (Section 2-2-1(f));

(4) Documentation of UST system repairs (Section 2-2-5);

(5) Documentation of compliance for spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping (Section 2-3-5);

(6) Documentation of periodic compliance inspections (Section 2-3-6);

(~~4~~7) Compliance with release detection requirements (Section 2-3-4);

(i) 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, must be maintained for 5 years, or for another reasonable period of time determined by the Director, from the date of installation. Not later than January 1, 2020, records of site assessments required under Section 2-3-4-2(e)(6) and (f)(7) must be maintained for as long as the methods are used. Records of site assessments developed after January 1, 2017, must be signed by a professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the implementing agency;

(ii) The results of any sampling, testing, or monitoring must be maintained for at least 1 year, or for another reasonable period of time determined by the Director, except as follows:

(a) that the results of tank tightness testing conducted in accordance with 2-3-4-2(c) must be retained until the next test is conducted; and

(iii) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the Director. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

(~~5~~8) Records in accordance with this section that are capable of demonstrating compliance with closure requirements under S~~s~~ection 2-4. The results of the excavation zone assessment required in 2-4-3(b) must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

(i) By the owners/operators who closed the UST system;

(ii) By the current owners/operators of the UST system site; or

(iii) By mailing these records to the Director if they cannot be maintained at the closed facility.

[Note: ~~a~~All applicants to the Fund may be required to maintain closure records until reimbursement is complete.]

(~~6~~9) Documentation of the emptying of a tank following seasonal operation, temporary closure, or prior to a repair.

(10) Documentation of operator training (Section 2-3-1-8).

(~~b~~c) Availability and Maintenance of Records. Owners/operators are required, upon request, to provide all records referenced in these regulations to the Director. Owners/operators must keep the required records either:

(1) At the UST site and immediately available for inspection by the Director; or

(2) At a readily available alternative site so they can be sent to the Director upon request; or

(3) In the case of permanent closure records required under this section, owners/operators are also provided with the additional alternative of mailing closure records to the Director if they cannot be kept at the site or an alternative site as indicated above.

(~~c~~d) Notwithstanding the above, for Fund reimbursement purposes, persons may be required to maintain the above or other records in accordance with Fund requirements.

Section 2-4 Closure of UST Systems

2-4-1 Temporary Closure

(a) Owners/operators shall notify the Director in writing at least 10 calendar days prior to placing an UST system in temporary closure, and at that same time submit records documenting the prior 12 months of release detection and corrosion protection testing (if applicable) for tanks and lines. In lieu of submitting these records, owner/operator may conduct a precision tightness test on the tanks and lines and complete a site assessment in accordance with 2-4-3, and submit these results with the temporary closure notification.

(b) A temporarily closed UST system must be emptied by removing all materials using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remains in the system.

(c) When an UST system is temporarily closed, owners/operators must continue operation and maintenance of corrosion protection in accordance with 2-3-4. Because the tanks must be emptied, release detection is not required.

(d) When an UST system is temporarily closed, vent lines must be left open and functioning. If the temporary closure period is 3 months or more, all pumps, manways, ancillary equipment and lines other than vent lines must be capped and secured, unless an alternate schedule is approved by the Director.

(e) When an UST system is temporarily closed for more than 12 months, owners/operators must permanently close the UST system in accordance with 2-4-2, unless the Director provides a written extension of the 12-month temporary closure period. Before requesting this extension, owners/operators must complete a site assessment as required by the Director.

(f) Owner/operators shall notify the Director in writing no more than 30 calendar days prior to placing an UST back in service, and at that same time submit corrosion protection records (if applicable) for the period of temporary closure, and documentation of passing tightness tests to include ullage for the tanks conducted within the past 30 calendar days. The owner/operator shall obtain passing line tests immediately following the introduction of fuel into the lines and submit documentation of testing to the Director within 10 calendar days.

(g) If an owner/operator operates a facility which has a specific period of time or season during the year when the tank system is empty, as described in (b) of this section, the requirements for maintaining corrosion protection and the following requirements below will apply:

(1) The owner/operator shall notify the Director that the facility does include seasonal operation on a form provided by the Director. If this information changes, the owner/operator shall complete and submit the form to the Director.

(2) The period may not exceed 6 consecutive months.

(3) The owner/operator shall maintain manifest documentation completed during emptying of the tank.

(4) At the end of the seasonal period, the owner/operator must conduct one of the following actions:

(i) Return the tank to service.

(ii) Place the tank into proper temporary closure. The owner/operator must notify the Director in writing within 10 calendar days, submit records according to (a) as applicable and complete requirements in (d) immediately.

(iii) Permanently close the tank as required by 2-4-2.

2-4-2 Permanent Closure

At least 10 calendar days before beginning either permanent closure or a change-in-service under this section, owners/operators must notify the Director of their intent to permanently close or make the change-in-service, unless such action is in response to corrective action required by the Director. In addition to the requirements of this section, the owner/operator should contact local municipal officials, such as the fire department, to inform them of the intended closure activities.

(a) Removal

To permanently close a tank by removal, owners/operators must empty the tank by removing all liquids and accumulated sludges and inert the tank prior to removal. A site assessment must be conducted according to 2-4-3(b).

[Note: The following cleaning and closure procedures may be used to comply with this section:

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

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

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

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

(b) Closure in Place

All tanks permanently closed in place must be filled with an inert solid material and a site assessment must be conducted according to 2-4-3(b).

(c) Change in Service

Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners/operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with 2-4-3.

2-4-3 Site Assessment

(a) Before an extension to temporary closure, permanent closure or a change-in-service is completed, owners/operators must measure for the presence of a release where contamination is most likely to be present at the UST site. The requirements of this section are satisfied if one of the external release detection methods allowed in 2-3-4-2(e) or (f) is operating in accordance with the requirements in 2-3-4-2 at the time of closure, and indicates no release has occurred.

(b) For assessments during storage tank system removal, the owner/operator must collect soil samples from beneath each tank, beneath each dispenser island, beneath areas of piping, and beneath any loading racks. For assessments during storage tank temporary closure, closure in-place or change-in-service, the owner/operator shall collect samples of the type and at locations as specified by the Director.

(c) Samples collected at all sites must be analyzed for individual chemicals of concern (COC) as described in 5-2.

(d) If contaminated soils, contaminated groundwater, petroleum vapor or free product as a liquid is discovered under this section, or by any other manner, owners/operators must report the discovery in accordance with Article 4.

(e) If the tank closure assessment does not identify a release, the owner/operator must submit documentation of the assessment to the Director within 30 calendar days of the tank closure.

Section 2-5 UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems

2-5-1 Definitions

For purposes of this subpart, the following definitions apply:

Airport hydrant fuel distribution system (also called airport hydrant system) means an UST system which fuels aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants (fill stands). The airport hydrant 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.

Field-constructed tank means a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed.

2-5-2 General requirements

(a) Implementation of requirements. Owners and operators must comply with the requirements of this section for UST systems with field-constructed tanks and airport hydrant systems as follows:

(1) For UST systems installed on or before January 1, 2017, the requirements are effective according to the following schedule:

Requirement	Effective Date
Upgrading UST systems; general operating requirements; and operator training	January 1, 2020
Release detection	January 1, 2020
Release reporting, response, and investigation; closure; financial responsibility and notification (except as provided in paragraph (b) of this section)	January 1, 2017

(2) For UST systems installed after January 1, 2017, the requirements apply at installation.

(b) Not later than January 1, 2020, all owners of previously deferred UST systems must submit a one-time notice of tank system existence to the implementing agency, using the form described in Section 2-2-3(b). Owners and operators of UST systems in use as of January 1, 2017, must demonstrate financial responsibility at the time of submission of the notification form.

(c) Except as provided in Section 2-5-3, owners and operators must comply with the requirements of these regulations.

(d) In addition to the codes of practice listed in Section 2-2-1, owners and operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing airport hydrant systems and UST systems with field-constructed tanks.

2-5-3 Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems

(a) Exception to piping secondary containment requirements. 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 and piping associated with airport hydrant systems. Piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons not part of an airport hydrant system must meet the secondary containment requirement when installed or replaced.

(b) Upgrade requirements. Not later than January 1, 2020, airport hydrant systems and UST systems with field-constructed tanks where installation commenced on or before January 1, 2017 must meet the following requirements or be permanently closed pursuant to 2-4 of this section.

(1) Corrosion protection. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:

(i) Except as provided in paragraph (a) of this section, the new UST system performance standards for tanks at 2-2-1(a) and for piping at 2-2-1(b); or

(ii) Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory and meets the following:

(A) Cathodic protection must meet the requirements of 2-2-1(a)(2)(ii), (iii) and (iv) for tanks, and 2-2-1(b)(2)(ii), (iii), and (iv) for piping.

(B) Tanks greater than 10 years old without cathodic protection must be assessed to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment must be by internal inspection or another method determined by the implementing agency to adequately assess the tank for structural soundness and corrosion holes.

[Note: The following codes of practice may be used to comply with this paragraph:

(A) NACE International Standard Practice SP 0285, “External Control of Underground Storage Tank Systems by Cathodic Protection”;

(B) NACE International Standard Practice SP 0169, “Control of External Corrosion on Underground or Submerged Metallic Piping Systems”;

(C) National Leak Prevention Association Standard 631, Chapter C, “Internal Inspection of Steel Tanks for Retrofit of Cathodic Protection”; or

(D) American Society for Testing and Materials Standard G158, “Standard Guide for Three Methods of Assessing Buried Steel Tanks”.]

(2) Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all UST systems with field-constructed tanks and airport hydrant systems must comply with new UST system spill and overfill prevention equipment requirements specified in 2-2-1(c).

(c) Compliance inspections. In addition to the compliance inspection requirements in 2-3-6, owners and operators must inspect the following additional areas for airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to 2-3-6-1(c).

(1) Hydrant pits – visually check for any damage; remove any liquid or debris; and check for any leaks, and

(2) Hydrant piping vaults – check for any hydrant piping leaks.

(d) Release detection. Owners and operators of UST systems with field-constructed tanks and airport hydrant systems must begin meeting the release detection requirements described in this subpart not later than January 1, 2020.

(1) Methods of release detection for field-constructed tanks. Owners and operators of field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in Section 2-3-4. Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in 2-3-4 (except 2-3-4-2(e) and (f) must be combined with inventory control as stated below) of this section or use one or a combination of the following alternative methods of release detection:

(i) Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;

(ii) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to one gallon per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three years;

(iii) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to two gallons per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two years;

(iv) Perform vapor monitoring (conducted in accordance with 2-3-4-2(e) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

(v) 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 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and

(A) Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two years; or

(B) Perform vapor monitoring or groundwater monitoring (conducted in accordance with 2-3-4-2(e) or (f), respectively, for the stored regulated substance) at least every 30 days; or

(vi) Another method approved by the implementing agency if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (i) through (v) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability of detection.

(2) Methods of release detection for piping. Owners and operators of underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in Section 2-3-4. Owners and operators of underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must follow either the requirements in 2-3-4 (except 2-3-4-2(e) and (f) must be combined with inventory control as stated below) of this section or use one or a combination of the following alternative methods of release detection:

(i)(A) 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

(B) Piping segment volumes ≥ 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

Phase In For Piping Segments ≥ 100,000 Gallons In Volume	
First test	Not later than January 1, 2020 (may use up to 6.0 gph leak rate)
Second test	Between January 1, 2020, and January 1, 2023 (may use up to 6.0 gph leak
Third test	Between January 1, 2023, and January 1, 2024 (must use 3.0 gph for leak rate)
Subsequent tests	After January 1, 2024, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above

(ii) Perform vapor monitoring (conducted in accordance with 2-3-4-2(e) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

(iii) 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 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and

(A) Perform a line tightness test (conducted in accordance with paragraph (i) of this section using the leak rates for the semiannual test) at least every two years; or

(B) Perform vapor monitoring or groundwater monitoring (conducted in accordance with 2-3-4-2(e) or (f), respectively, for the stored regulated substance) at least every 30 days; or

(iv) Another method approved by the implementing agency if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (i) through (iii) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability of detection.

(3) Recordkeeping for release detection. Owners and operators must maintain release detection records according to the recordkeeping requirements in 2-3-6.

(e) Applicability of closure requirements to previously closed UST systems. When directed by the implementing agency, the owner and operator of an UST system with field-constructed tanks or airport hydrant system permanently closed before January 1, 2017, must assess the excavation zone and close the UST system in accordance with Section 2-4 if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.

ARTICLE 3 ABOVEGROUND STORAGE TANKS

Section 3-1 AST Program Scope and Applicability

Aboveground storage tank (AST) systems in Colorado are regulated to protect the people and environment of Colorado from the potentially harmful effects of the regulated substances contained within AST systems. The purpose of this article is to present to owner/operators of AST systems a description of the minimum general standards for design, construction, location, installation and operation of these systems to be in compliance with these regulations and Colorado statutes. Further description of these requirements can be found in guidance documents, policies and procedures provided by the Director.

(a) The provisions in these regulations apply to all regulated substance AST systems unless specifically restricted to a specific system. It is the owner/operator's responsibility to ensure compliance with all requirements.

(1) Aside from meeting these regulatory requirements:

(i) All AST systems must meet local fire district rules, zoning rules, and requirements of other authorities having jurisdiction over AST systems.

(ii) C.R.S. § 8-20-231 requires that the design, construction, location, installation, and operation of all liquid fuel product tank systems greater than 60 gallons conform to the minimum standards prescribed by the applicable sections of NFPA fire code. This includes the testing and inspection requirements contained therein.

(2) For the purposes of these regulations, a tank's capacity is determined by the aggregate capacity of all individual primary tank compartments contained within the outer shell or structure of the tank, whether there is a shared bulkhead or not. Each compartment of an AST must meet the operational requirements contained herein individually (e.g. venting, overfill prevention, release detection, etc.)

Example: A single concrete-encased UL 2085 AST whose construction consists of two individual 500 gallon UL 142 ASTs wrapped in a polyethylene liner is considered as having a capacity of 1,000 gallons. Each compartment (tank) must be equipped to meet operational requirements

(b) Per C.R.S. § 8-20.5-101(2)(b), the following ASTs or AST systems are excluded from these AST regulations:

(1) Not withstanding requirements listed in (a)(1) of this section, any AST whose capacity is greater than 39,999 gallons or less than 660 gallons;

(2) Any AST system that contains a de minimis concentration of regulated substances;

(3) Any AST systems containing radioactive material that are regulated under the Atomic Energy Act;

(4) Any AST system that is part of an emergency generator system at nuclear power generation facilities;

(5) ASTs used to store liquefied petroleum gases that are not liquid at standard temperature and pressure;

(6) ASTs used to store liquids whose fluidity is less than that of 300 penetration asphalt when tested in accordance with ASTM D 5.

(7) A wastewater treatment tank system that is part of a wastewater treatment facility;

(8) Equipment or machinery that contains regulated substances for operational purposes;

(9) Farm and residential tanks or tanks used for horticultural or floricultural operations.

(10) Aboveground storage tanks located at natural gas pipeline facilities that are regulated under state or federal natural gas pipeline acts;

(11) Aboveground storage tanks associated with natural gas liquids separation, gathering, and production;

(12) Aboveground storage tanks associated with crude oil production, storage, and gathering;

(13) Aboveground storage tanks at transportation-related facilities regulated by the federal department of transportation;

(14) Aboveground storage tanks used to store heating oil for consumptive use on the premises where stored

(15) Aboveground storage tanks used to store flammable and combustible liquids at mining facilities and construction and earthmoving projects, including gravel pits, quarries, and borrow pits where, in the opinion of the Director, tight control by the owner or contractor and isolation from other structures make it unnecessary to meet the requirements of this article.

Section 3-2 AST System Design, Construction, Location and Installation

These performance standards apply to regulated AST systems that store stable liquids in atmospheric ASTs where internal operating pressures do not exceed 2.5 psi. Requirements for the storage of other liquids in other types of ASTs at greater operating pressures are found in NFPA 30, and must be followed.

3-2-1 Design

(a) Tank Design and Materials of Construction

(1) All tanks shall be designed and built in accordance with recognized good engineering standards for the material of construction being used and shall be of steel or approved noncombustible material, with the following limitations and exceptions:

(i) The material of tank construction shall be compatible with the liquid to be stored. In case of doubt about the properties of the liquid to be stored, the supplier, producer of the liquid, or other competent authority shall be consulted.

(A) Tanks designed and intended for above ground use shall not be used as underground tanks.

(B) Tanks designed and intended for underground use shall not be used as aboveground tanks.

(ii) Tanks constructed of combustible materials shall be subject to the approval of the Director and limited to:

(A) Use where required by the properties of the liquid stored, or

(B) Storage of Class IIIB liquids above ground in areas not exposed to spill or leak of Class I or Class II liquid, or

(C) Storage of Class IIIB liquids inside a building protected by an approved automatic fire extinguishing system.

(iii) Atmospheric tanks shall not be used for the storage of a liquid at a temperature at or above its boiling point. Atmospheric tanks shall be labeled and shall be built, installed, and used within the scope of a nationally recognized construction standard; such as U.L. 142, or API Standard 650, or an equivalent standard.

(b) Vent Piping

The design, fabrication, assembly, testing, and inspection of all piping systems for flammable and combustible liquids shall be in conformance with the applicable sections of ANSI B31, *American National Standard Code for Pressure Piping* and installed in conformance with the following requirements:

(1) Where vent pipe outlets for tanks storing Class I liquids are adjacent to buildings or public ways, they shall be located so that the vapors are released at a safe point outside of buildings and not less than 12 ft (3.6 m) above the adjacent ground level. In order to aid their dispersion, vapors shall be discharged upward or horizontally away from closely adjacent walls. Vent outlets shall be located so that flammable vapors will not be trapped by eaves or other obstructions and shall be at least 5 ft (1.5 m) from building openings.

(i) Vent piping that it is attached to or within a canopy or its supporting structure must extend a minimum of 5 ft (1.5 m) above the highest projection of the canopy, including the canopy fascia. When modifications to the canopy are made, this distance must be maintained.

Exception: Where the canopy or canopy modifications were installed before January 1, 2004, changes to existing vent piping are not required.

(2) The manifolding of tank vent piping shall be avoided except where required for special purposes such as vapor recovery, vapor conservation, or air pollution control. When tank vent piping is manifolded, pipe sizes shall be such as to discharge, within the pressure limitations of the system, the vapors they may be required to handle when manifolded tanks are subject to the same fire exposure.

(3) Vent piping for tanks storing Class I liquids shall not be manifolded with vent piping for tanks storing Class II or Class III liquids unless means are provided to prevent the vapors from Class I liquids from entering tanks storing Class II or Class III liquids, to prevent possible change in classification of the less volatile liquid.

(c) Normal Venting

(1) Atmospheric tanks shall be adequately vented to prevent the development of vacuum or pressure that can distort or damage the tank or that exceeds the design pressure, as a result of filling or emptying the tank or atmospheric temperature changes.

(2) For ASTs installed after September 30, 1994, normal vents shall be:

(i) sized in accordance with American Petroleum Institute Standard No. 2000, Venting Atmospheric and Low-Pressure Storage Tanks, or another accepted standard; or

(ii) at least as large as the filling or withdrawal connection, whichever is larger, but in no case less than 1 1/4 in. (3 cm) nominal inside diameter.

(3) If any AST installed after September 30, 1994 has more than one fill or withdrawal connection and simultaneous filling or withdrawal can be made, the vent size shall be based on the maximum anticipated simultaneous flow.

(4) Except for tanks containing Class III liquids, vents shall be equipped with venting devices.

(i) Tanks containing Class IA liquids shall be equipped with venting devices that are closed, except when venting under pressure or vacuum conditions.

(ii) Tanks containing Class IB and IC liquids shall be equipped with venting devices that are closed, except when venting under pressure or vacuum conditions, or with listed flame arresters.

(iii) Tanks containing Class II liquids shall be equipped with venting devices that will protect the tank against the intrusion of water, debris, or insects.

(5) Adequate ventilation either natural or forced must exist to guarantee that flammable liquid vapors cannot build up to 25% of the lower flammable limit anywhere, because of the presence of the tank facility in question.

(d) Emergency Relief Venting

(1) Every AST shall have some form of construction or device that will relieve excessive internal pressure caused by exposure to fires.

(i) This requirement shall also apply to each compartment of a compartmented tank, the interstitial space of secondary containment-type tanks, and the enclosed space of closed-top dike tanks, except where the tank was constructed prior to the publication of the 1996 edition of NFPA 30.

Exception: Tanks larger than 12,000 gallons capacity storing Class IIIB liquids do not require emergency relief venting unless they are within the diked area or the drainage path of Class I or Class II liquids.

(2) In a vertical tank, the construction referred to in 3-2-1(d)(1) may take the form of a floating roof, lifter roof, a weak roof-to-shell seam, or other approved pressure-relieving construction. The weak roof-to-shell seam shall be constructed to fail preferential to any other seam. Design methods that will provide a weak roof-to-shell seam construction are contained in API 650, Welded Steel Tanks for Oil Storage, and UL 142, Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids.

(3) Where entire dependence for emergency relief is placed upon pressure-relieving devices, the total venting capacity of both normal and emergency vents shall be enough to prevent rupture of the shell or bottom of the tank if vertical, or of the shell or heads if horizontal.

(4) The total capacity of both normal and emergency venting devices shall not be less than the requirements of NFPA 30.

(5) Emergency relief vent devices shall be vapor tight and shall be permitted to be a self-closing manway cover, a manway cover provided with long bolts that permit the cover to lift under internal pressure, or additional or larger relief valve or valves.

(6) Each commercial tank venting device shall be stamped with the operational pressures and capacities required by NFPA 30.

(7) For the extension of emergency vent piping, piping to or from approved emergency vent devices shall be sized to provide emergency vent flows that limit the back pressure to less than the maximum pressure permitted by the design of the tank.

(8) The required emergency relief venting capacities for tanks and devices, requirements for tanks storing unstable liquids, additional requirements for tanks other than atmospheric, and other requirements for emergency relief venting design are found in NFPA 30.

(e) Tank Openings Other than Vents

(1) Each connection to an AST through which liquid can normally flow shall be provided with an internal or an external valve located as close as practical to the shell of the tank.

(2) Each connection below the liquid level through which liquid does not normally flow shall be provided with a liquid-tight closure. This may be a valve, plug, or blind, or a combination of these.

(3) Openings for gauging on tanks storing Class I liquids shall be provided with a vapor-tight cap or cover. Such covers shall be closed when not gauging.

(4) Fill pipes that enter the top of a tank shall terminate within 6 in (15 cm) of the bottom of the tank. Fill pipes shall be installed or arranged so that vibration is minimized.

Exception: Fill pipes in tanks whose vapor space, under normal operating conditions, is not in the flammable range need not meet this requirement.

(5) Filling and emptying connections for Class I, Class II, and Class IIIA liquids that are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than 5 ft. (1.5 m) away from any building opening. Such connections for any liquid shall be closed and liquid tight when not in use and shall be properly identified.

(f) Static Protection for all ASTs

(1) Grounding Required

All equipment such as tanks, machinery and piping, where an ignitable mixture may be present shall be bonded or connected to a ground.

(2) Bonding Facilities Required

The bond or ground or both shall be physically applied or shall be inherently present by the nature of the installation; and

(i) Bonding facilities for protection against static sparks during the loading of tank vehicles through open domes shall be provided:

(A) Where Class I liquids are loaded, or

(B) Where Class II or Class III liquids are loaded into vehicles that may contain vapors from previous cargoes of Class I liquids; and

(ii) Bonding facilities shall consist of a metallic bond wire permanently electrically connected to the fill stem, or to some part of the rack structure in electrical contact with the fill stem. The free end of such wire shall be provided with a clamp or equivalent device for convenient attachment to some metallic part in electrical contact with the cargo tank of the tank vehicle. (This can be a simple ground clamp used while loading).

(g) Standards for Piping, Valves, and Fittings

(1) General and Suction Systems.

(i) For the purpose these regulations, piping connected to an AST is considered to be suction piping when the entire length of piping is at a higher elevation than the

AST it is connected to, and where there is no pump installed between the tank and piping. All other piping connected to an AST is pressurized piping.

(A) ASTs with underground piping must meet **all** of the requirements for underground pressurized piping contained in Article 2 of these regulations, including the construction, corrosion protection, and installation requirements of 2-2-1 (b), the secondary containment requirements of 2-2-1(e) for piping installed after April 14, 2011, and release detection requirements of 2-3-4-3.

(ii) Liquid shall not be dispensed from a tank by pressurization of the tank. Means shall be provided to prevent the release of liquid by siphon flow.

(iii) On or after October 14, 2012, where an AST is at an elevation that produces a gravity head on a motor fuel dispensing device, the tank outlet shall be equipped with a device (such as a normally closed solenoid valve) that will prevent gravity flow from the tank to the dispenser. This device shall be located adjacent to and downstream of the main valve specified by 3-2-1(e)(1) of these regulations. The device shall be installed and adjusted so that liquid cannot flow by gravity from the tank to the dispenser in the event of failure of the piping or hose when the dispenser is not in use.

(iv) Where a suction-type dispensing system includes a booster pump or where a suction-type dispensing system is supplied by a tank in a manner that produces a gravity head on the dispensing device, a listed, vacuum-actuated shutoff valve with a shear section or equivalent type valve shall be installed directly under the dispensing device.

(A) Suction-type dispensing systems installed before April 14, 2011 that include a solenoid valve at the tank outlet, and a listed, rigidly anchored emergency shutoff valve incorporating a fusible link or other thermally actuated device, designed to close automatically in event of severe impact or fire exposure are deemed to meet this requirement.

(v) For ASTs installed after September 30, 1994, shutoff and check valves shall be equipped with a pressure-relieving device that will relieve the pressure generated by thermal expansion back to the tank.

(vi) Piping shall be routed so that exposure to physical damage is minimized.

(vii) Piping systems shall be supported and protected against physical damage, including damage from stresses arising from settlement, vibration, expansion, or contraction.

(2) Remote Pumping Systems

This section shall apply to systems for dispensing Class I liquids and Class II liquids where such liquids are transferred from storage to individual or multiple dispensing devices by pumps located other than at the dispensing devices.

(i) Pumps shall be listed and designed or equipped so that no part of the system will be subjected to pressures above its allowable working pressure.

(ii) Each pump shall have installed, on the discharge side, a listed leak detection device that will provide an indication if the piping and dispensers are not essentially liquid tight. Each leak-detecting device shall be checked and tested at least annually according to the manufacturer's specifications.

(iii) Pumps installed above-grade and outside of buildings shall be located not less than 10 ft. (3 m) from lines of adjoining property that can be built upon and not less than 5 ft. (1.5 m) from any building opening. Pumps shall be substantially anchored and protected against physical damage.

(iv) A listed rigidly anchored emergency shutoff valve, incorporating a fusible link or other thermally actuated device designed to close automatically in event of severe impact or fire exposure, shall be installed in accordance with the manufacturer's instructions in the supply line at the base of each individual island-type dispenser or at the inlet of each overhead dispensing device. An emergency shutoff valve incorporating a slip-joint feature shall not be used. The automatic closing feature of this valve shall be checked at the time of initial installation and at least once a year thereafter by manually tripping the hold-open linkage.

(v) Any vapor return pipe inside the dispenser housing shall have a shear section or flexible connector so that the liquid emergency shutoff valve will function as described above.

(3) Breakaway devices

A listed emergency breakaway device designed to retain liquid on both sides of the breakaway point shall be installed on each hose dispensing Class I and Class II liquids. Such devices are not required at marine service stations.

(h) Compatibility Requirements

Owners/operators must use an AST system made of or lined with materials that are compatible with the substance stored in the AST.

[Note: Owners/operators storing alcohol blends may use the following codes to comply with the requirements of this section: (a) American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and (b) American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Co-solvent Blends at Distribution Terminals and Service Stations."]

(i) Security

(1) Where tanks are supported above the foundations, tank supports shall be installed on firm foundations. Steel supports or exposed piling supports for tanks storing Class I, Class II, or Class IIIA liquids shall be protected by materials having a fire resistance rating of not less than 2 hours.

(2) Every tank shall be supported to prevent the excessive concentration of loads on the supporting portion of the tank shell.

(3) The area within the fence (if applicable) and within any dike shall be kept free of vegetation, debris, and any other material that is not necessary to the proper operation of the tank and piping system.

(4) After December 22, 1996, tanks that are not listed as UL 2085 Protected Tanks where fuel is dispensed into vehicles shall be protected against vehicular collision by suitable barriers, which may include buildings and open space which the Director approves in writing.

(5) Tanks which are not enclosed in vaults shall be enclosed with a chain link fence at least 6 ft. high. The fence shall be separated from the tanks by at least 10 ft. and shall have a gate that is secured against unauthorized entry. This requirement applies to:

(i) Tanks at motor fuel dispensing facilities, and

(ii) Tanks at all other facilities that have an individual or aggregate capacity of 12,000 gallons or more.

Exception: Tanks are not required to be enclosed with a fence if the property on which the tanks are located has a perimeter security fence.

(6) Tanks that are unsupervised for any period of time, or are located in isolated/remote areas, shall be secured and shall be marked to identify the fire hazards of the tank and the tank's contents to the general public. Where necessary to protect the tank from tampering or trespassing, the area where the tank is located shall be secured.

(7) For ASTs installed after September 30, 1994, tank supports and foundations shall be designed to minimize the possibility of uneven settling of the tank and to minimize corrosion to any part of the tank.

3-2-2 Location and Installation

3-2-2-1 Service Stations (Motor Fuel Dispensing Facilities and Repair Garages)

After September 30, 1994, new ASTs may only be installed at service stations if they meet all the general requirements for ASTs, and the service station requirements of this section. After December 22, 1996, tanks designed and built for underground use shall not be used as ASTs. All of the provisions in this section also apply to marine service stations and airport service stations.

(a) For ASTs installed after September 30, 1994, tanks storing Class I and Class II liquids at an individual site shall be limited to a maximum individual capacity of 12,000 gallons and an aggregate capacity of 48,000 gallons unless such tanks are installed in vaults complying with 3-2-2-5, in which case the maximum individual capacity shall be permitted to be 15,000 gallons.

(b) For ASTs installed after September 30, 1994, and before April 14, 2011, tanks shall be located in accordance with Table 1 in this section, except that for secondary containment tanks, "fire tested" tanks, "fire resistant" tanks or tanks installed in a vault, the distance requirement from tank to dispenser is waived, provided that all tanks, pipes and dispensers are satisfactorily protected from vehicular traffic.

(c) For ASTs installed on or after April 14, 2011, ASTs shall be located in accordance with Table 1 below.

TABLE 1	AST Separation at Motor Fuel Dispensing Facilities and Repair Garages					
		Minimum Distance (ft)				
Type of Tank	***Individual Tank Capacity (gal)***	***From Nearest Important Building on the Same Property***	***From Nearest Fuel Dispensing Device***	***From Property Line That Is or Can Be Built Upon Including Opposite Side of Public Way***	***From Nearest Side of Any Public Way***	***Between Tanks***
Tanks in vaults *(measured from vault perimeter)*	0 – 15,000	0	0	0	0	Separate vault compartments for each AST
Protected ASTs (UL 2085)	≤ 6,000	5	0	15	5	3
	6,001 – 12,000	15	0	25	15	3
Fire-resistant ASTs (UL 2080)	0 – 12,000	25	25	50	25	3
Other ASTs meeting NFPA 30 requirements	0 – 12,000	50	50	100	50	3

(d) Bulk Plants with Motor Fuel Dispensing.

This section does not include facilities that meet the requirements of 3-2-2-3.

(1) For facilities existing before April 14, 2011:

(i) ASTs shall meet the location and installation requirements of 3-2-2-4.

(ii) Where the 50 ft distance requirement from tank to dispenser is met, the following shall apply to the ASTs used for both motor fuel dispensing **and** bulk operations:

ASTs storing Class I liquids shall be limited to a maximum individual capacity of 12,000 gallons, ASTs storing Class II liquids shall be limited to a maximum individual capacity of 20,000 gallons, and the aggregate capacity for all tanks shall be 80,000 gallons.

[Note: There are no individual or aggregate capacity limits for ASTs used **solely** for bulk operations.]

(iii) Where the 50 ft distance requirement from tank to dispenser is not met, the following shall apply to the ASTs used for both motor fuel dispensing **and** bulk operations:

ASTs storing Class I and Class II liquids shall be limited to a maximum individual capacity of 12,000 gallons, and an aggregate capacity of 48,000 gallons.

[Note: There are no individual or aggregate capacity limits for ASTs used **solely** for bulk operations.]

(2) For new facilities installed on or after April 14, 2011:

(i) ASTs used for motor fuel dispensing shall meet the capacity and location requirements of 3-2-2-1, except that the maximum individual tank capacity of 12,000 gallons, indicated in Table 1, shall be permitted to be increased to 20,000 gallons for Class II liquids, and the aggregate capacity for all tanks shall be 80,000 gallons.

[Note: ASTs that are used for motor fuel dispensing shall not be used for bulk operations.]

(ii) ASTs used for bulk operations shall meet the location and installation requirements of 3-2-2-4.

[Note: ASTs that are used for bulk operations shall not be used for motor fuel dispensing.]

(3) ASTs used solely for bulk operations shall not be connected by piping to ASTs or USTs used for motor fuel dispensing, and shall not supply dispensing devices used for motor vehicle fueling.

Exception: Where the total capacity of all ASTs used for motor fuel dispensing and all ASTs used solely for bulk operations is within the aggregate capacities allowed by 3-2-2-1 (d)(1) (ii) or (iii), changes to connected piping are not required.

(4) The motor fuel dispensing operations shall be separated from areas in which bulk plant operations are conducted by a fence or an approved structure (building, retaining wall, etc.), preventing direct access from one area to the other.

3-2-2-2 Governmental, Industrial and Commercial AST Facilities (Fleet Vehicle Motor Fuel Dispensing)

AST installations are permitted at commercial, industrial, governmental, and manufacturing facilities where motor fuels are dispensed into vehicles used in connection with their business by employees, but only under one of the following conditions:

(a) For ASTs installed before April 14, 2011, existing restricted-capacity fleet vehicle motor fuel dispensing operations that meet the following requirements are allowed:

(1) The facility has been inspected and approved by the Director;

(2) No more than two (2) ASTs are in service at the facility;

(3) No AST at the facility has a capacity greater than 6,000 U.S. gallons;

(4) There is not more than one (1) tank at the facility containing Class I liquids; and

(5) The spacing requirements of Table 2 below are met.

TABLE 2	AST Separation at Restricted-Capacity Fleet Motor Fuel Dispensing Facilities (Before April 14, 2011)				
	Minimum Distance (ft)				
Tank Capacity (gal)	*From Nearest Important Building on the Same Property*	*From Nearest Fuel Dispensing Device*	*From Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way*	*From Nearest Side of Any Public Way*	*Between Tanks*
660 - 750	5	0	10	5	3
751 – 6,000	5	0	15	5	3

(b) On or after April 14, 2011, new restricted-capacity fleet vehicle motor fuel dispensing operations shall be allowed where the following requirements are met:

(1) The requirements of 3-2-2-2(a)(1) – (4) are met; and

(2) The spacing requirements of Table 3 below are met.

TABLE 3	AST Separation at Restricted-Capacity Fleet Motor Fuel Dispensing Facilities (On or after April 14, 2011)				
	Minimum Distance (ft)				
Tank Capacity (gal)	*From Nearest Important Building on the Same Property*	*From Nearest Fuel Dispensing Device*	*From Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way*	*From Nearest Side of Any Public Way*	*Between Tanks*
660 – 2,000	25	0	50	25	3
2,001 - 6,000	25	0	75	35	3

(c) For ASTs installed before April 14, 2011, if the AST system meets the requirements of 3-2-2-1(b) it can operate under the service station capacity allowances.

(d) On or after April 14, 2011, fleet vehicle motor fuel dispensing operations shall be allowed where the following requirements are met:

(1) The spacing requirements of Table 4 below are met.

(i) The maximum individual tank capacity of 12,000 gallons, indicated in Table 4 below, shall be permitted to be increased to 20,000 gallons for Class II and Class III liquids, and the aggregate capacity for all tanks shall be 80,000 gallons; and

(ii) No minimum separation shall be required between the dispensing device and a tank in a vault, a protected aboveground tank, or a fire-resistant tank.

TABLE 4	AST Separation at Fleet Motor Fuel Dispensing Facilities					
		Minimum Distance (ft)				
Type of Tank	***Individual Tank Capacity (gal)***	***From Nearest Important Building on the Same Property***	***From Nearest Fuel Dispensing Device***	***From Property Line That Is or Can Be Built Upon Including Opposite Side of Public Way***	***From Nearest Side of Any Public Way***	***Between Tanks***
Tanks in vaults *(measured from vault perimeter)*	0 – 15,000	0	0	0	0	Separate vault compartments for each AST
Protected ASTs (UL 2085)	≤ 6,000	5	0	15	5	3
	6,001 – 12,000	15	0	25	15	3
Fire-resistant ASTs (UL 2080)	0 – 12,000	25	0	50	25	3
Other ASTs meeting NFPA 30 requirements	0 – 12,000	50	50	100	50	3

3-2-2-3 Unattended Cardlock Systems

(a) On or after April 14, 2011, unattended cardlock systems are those motor fuel dispensing facilities already in existence which are located at bulk plants, governmental, industrial, and commercial facilities where only proprietary cards (or keys) issued by the facility, and that are specific to the facility's fuel management or point of sale system, can be used to dispense fuel. Proprietary cards do not include cards that are available for regional or national fleet fueling.

(1) Cardlock systems installed before October 1, 1994 shall meet the AST separation distances of 3-2-2-4(a).

(2) Cardlock systems installed on October 1, 1994 or thereafter shall meet the AST separation distances of 3-2-2-4(a), and the tank-to-dispenser separation distances of 3-2-2-1(b).

(3) Persons that are issued proprietary cards (or keys) must be knowledgeable in site-specific operating and emergency procedures for dispensing operations.

3-2-2-4 Bulk Plants (And Other Facilities Without Motor Fuel Dispensing)

This section applies to ASTs storing regulated substances, including emergency generator tanks, outdoors at bulk plants and other facilities (except those facilities covered by 3-2-2-1) where there is no motor fuel dispensing.

The following requirements and tables showing required minimum separation distances apply to facilities in this section that store stable liquids in atmospheric ASTs where internal operating pressures do not exceed 2.5 psi. Requirements for the storage of other liquids in other types of ASTs at greater operating pressures are found in NFPA 30, and must be followed.

(a) Every AST which is installed after September 30, 1994 and used for the storage of Class I, Class II, or Class IIIA stable liquids and operating at pressures not in excess of 2.5 psig (17.2 kPa) and designed with a weak roof-to-shell seam, or equipped with emergency venting devices that will

not permit pressures to exceed 2.5 psig (17.2 kPa), shall be located in accordance with Table 5 in this section. Where tank spacing is contingent on a weak roof-to-shell seam design, the user shall present evidence certifying such construction to the Director, upon request.

Exception: Vertical tanks with weak roof-to-shell seams that store Class IIIA liquids shall be permitted to be located at one-half the distances specified in Table 5, provided the tanks are not within the same diked area as, or within the drainage path of, a tank storing a Class I or Class II liquid.

(b) Every AST which is installed after September 30, 1994 and used for the storage of Class I, Class II, or Class IIIA stable liquids and operating at pressures exceeding 2.5 psig (17.2 kPa) or equipped with emergency venting that will permit pressures to exceed 2.5 psig (17.2 kPa), shall be located in accordance with, and meet the requirements of NFPA 30.

(c) Every AST which is installed after September 30, 1994 and used for the storage of liquids with boil-over characteristics shall be located in accordance with, and meet the requirements of NFPA 30.

(d) Every AST which is installed after September 30, 1994 and used for the storage of unstable liquids shall be located in accordance with, and meet the requirements of NFPA 30.

(e) For ASTs installed before April 14, 2011, spacing (Shell-to-Shell) between any two adjacent ASTs, where one AST is installed after September 30, 1994, with tanks storing Class I, II, or IIIA stable liquids shall be separated in accordance with Table 5 in this section.

(f) On or after April 14, 2011, tanks used only for storing Class IIIB liquids shall not be required to be separated by more than 3 ft provided they are not within the same diked area as, or within the drainage path of, a tank storing a Class I or II liquid. If located within the same diked area as, or within the drainage path of, a tank storing a Class I or II liquid, the tank storing Class IIIB liquid shall be spaced in accordance with the requirements for Class IIIA liquids in Table 5.

(g) Every AST which is installed after September 30, 1994 and used for the storage of Class IIIB stable liquids shall be located in accordance with Table 7 in this section.

Exception: If located within the same diked area as, or within the drainage path of, a tank storing a Class I or Class II liquid, the tank storing Class IIIB liquid shall be located in accordance with 3-2-2-4(a).

TABLE 5	Location of Atmospheric ASTs Storing Stable Liquids (Class I, II, IIIA) Internal Pressure Not to Exceed a Gauge Pressure of 2.5 psi			
		Minimum Distance (ft)		
Type of Tank	***Protection***	***From Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way***	***From Nearest Side of Any Public Way or from Nearest Important Building on the Same Property***	***Minimum Tank Shell-to-Shell Spacing***
Floating Roof	Protection for exposures	1/2 x tank diameter	1/6 x tank diameter	**Greater of** 1/6 x sum of adjacent tank diameters or 3 ft
	None	Tank diameter	1/6 x tank diameter	
Vertical with weak roof-to-shell seam	Approved foam or inerting system	1/2 x tank diameter	1/6 x tank diameter	**Greater of** 1/6 x sum of adjacent tank diameters or 3 ft
	Protection for exposures	Tank diameter	1/3 x tank diameter	
	None	2 x tank diameter	1/3 x tank diameter	
Horizontal and vertical tanks with emergency relief venting to limit pressures to 2.5 psi	Approved foam or inerting system	1/2 x value in table 6	1/2 x value in table 6	**Greater of** 1/6 x sum of adjacent tank diameters or 3 ft
	Protection for exposures	Value in table 6	Value in table 6	
	None	2 x value in table 6	Value in table 6	
Protected aboveground tank	None	1/2 x value in table 6	1/2 x value in table 6	**Greater of** 1/6 x sum of adjacent tank diameters or 3 ft
In most cases "protection for exposures" will apply.		***Greater of*** *values shown above or 5 ft*		***3 ft min. where sum of adjacent tank diameters is ≤ 18 ft***
PROTECTION FOR EXPOSURES *- Fire protection for structures on property adjacent to liquid storage that is provided by (1) a public fire department or (2) a private fire brigade maintained on the property adjacent to the liquid storage, either of which is capable of providing cooling water streams to protect the property adjacent to the liquid storage.*				

TABLE 6	Distances for Use with Table 5 (Above)	
	Minimum Distance (ft)	
Tank Capacity (gal)	***From Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way***	***From Nearest Side of Any Public Way or from Nearest Important Building on the Same Property***
660 - 750	10	5
751 – 12,000	15	5
12,001 – 30,000	20	5
30,001 – 39,999	30	10

TABLE 7	Location of ASTs Storing Class IIIB Liquids	
	Minimum Distance (ft)	
Tank Capacity (gal)	***From Property Line That Is or Can Be Built Upon, Including the Opposite Side of a Public Way***	***From Nearest Side of Any Public Way or from Nearest Important Building on the Same Property***
12,000 or less	5	5
12,000 - 30,000	10	5
30,001 - 39,999	10	10

3-2-2-5 ASTs in Vaults

The provisions in this section apply only to ASTs installed after September 30, 1994.

(a) There shall be no openings in the vault enclosure except those necessary for access to, inspection of, and filling, emptying, and venting of the tank. The walls and floor of the vault shall be constructed of reinforced concrete at least 6 inches (15 cm) thick. The top shall be constructed of non-combustible material constructed to be weaker than the walls. The top, floor, and tank foundation shall be designed to withstand the anticipated loading. The vault shall be substantially liquid tight (able to contain the product for enough time until any release therein can be cleaned up) and there shall be no backfill material around the tank. There shall be sufficient space between the tank and vault to allow for inspection of the tank and its appurtenances.

(b) Each vault and its tank shall be suitably anchored to withstand uplifting by groundwater or flooding, including when the tank is empty.

(c) A vault shall be designed to be wind and earthquake resistant in accordance with good engineering practice. The vault shall be resistant to damage from the impact of a motor vehicle, or suitable collision barriers shall be provided.

(d) Each tank shall be in its own vault. Adjacent vaults may share a common wall.

(e) Connections shall be provided to permit venting of each vault to dilute, disperse, and remove any vapors prior to personnel entering the vault.

(f) Vaults that contain tanks of Class I liquids shall be provided with continuous ventilation at a rate of not less than 1 cubic foot per minute per square foot of floor area ($0.3m^3$/min-m^3), but not less than 150 cfm ($4m^3$/min). Failure of the exhaust air flow shall automatically shut down the dispensing system. The exhaust system shall be designed to provide air movement across all parts of the vault floor. Supply and exhaust ducts shall extend to within 3 in. (7.6 cm), but not more than 12 in. (30.5 cm), of the floor. The exhaust system shall be installed in accordance with the provisions of NFPA 91, *Standard for Exhaust Systems for Air Conveying of Materials*. Means shall be provided to automatically detect any flammable vapors and to automatically shut down the dispensing system upon detection of such flammable vapors in the exhaust duct at or above a concentration of 25 percent of the lower flammable limit.

(g) Each vault shall be equipped with a detection system capable of detecting liquids, including water, and of activating an alarm.

(h) Means shall be provided to recover liquid from the vault. If a pump is used to meet this requirement, the pump shall not be permanently installed in the vault. Electric powered portable pumps shall be suitable for use in Class I, Division 1 locations, as defined in NFPA 70, National Electrical Code.

(i) Vent pipes that are provided for normal tank venting shall terminate at least 12 ft. (3.6m) above ground level.

(j) Emergency vents shall be vapor tight and shall be permitted to discharge inside the vault. Long-bolt manhole covers shall not be permitted for this purpose.

(k) Each vault shall be provided with a means for personnel entry. At each entry point, a warning sign indicating the need for procedures for safe entry into confined spaces shall be posted. Each entry point shall be secured against unauthorized entry and vandalism.

(l) Each vault shall be provided with a suitable means to admit a fire suppression agent.

(m) The interior of any vault containing a tank that stores a Class I liquid shall be designated a Class I, Division 1 location, as defined in NFPA 70, *National Electrical Code*.

3-2-2-6 Tanks Inside Buildings

Exception: Tanks storing Class IIIB liquids need not comply with these provisions.

Tanks shall not be permitted inside of buildings unless the storage of liquids in outside aboveground or underground tanks is not practical because of government regulations, temperature considerations or production considerations. Tanks may be permitted inside of buildings or structures only when permitted by the Director and only under the following conditions:

(a) ASTs installed after September 30, 1994 inside buildings shall be permitted only in areas at or above grade that have adequate drainage and are separated from other parts of the building by construction having a fire resistance rating of at least 2 hours. Day tanks, running tanks, and surge tanks are permitted in process areas. Class I, Class II and Class IIIA liquids that may be heated above their flash points shall not be stored in basements. Openings to other rooms or buildings shall be provided with noncombustible liquid tight raised sills or ramps at least 4 in. (10 cm) in height, or the floor in the storage area shall be at least 4 in. (10 cm) below the surrounding floor. As a minimum, each opening shall be provided with a listed, self-closing 1 1/2-hr (B) fire door installed in accordance with the current versions of NFPA 80, *Standard for Fire Doors and Fire Windows*; NFPA 90A *Standard for the Installation of Air Conditioning and Ventilating Systems*, or NFPA 91, *Standard for the Installation of Blower and Exhaust Systems for Dust, Stock, and Vapor Removal or Conveying*. The room shall be constructed without floor drains and with seals between walls and floor of the room in order to contain the product in case of leakage or spillage from the tank.

(1) Secondary containment tanks do not remove the requirement for the raised sills or ramps at openings to other rooms or buildings, or lowered floor requirements described in (a) above. An open-grated trench across the width of the opening inside of the room that drains to a safe location shall be permitted to be used as an alternative to a sill or ramp.

(2) The room shall be liquid tight where the walls join the floor and for at least 4 in. above the floor.

(3) Access aisles of at least 3 ft. width shall be maintained for movement of firefighting personnel and fire protection equipment.

(b) Each connection to a tank inside buildings through which liquid can normally flow shall be provided with an internal or an external valve located as close as practicable to the shell of the tank; and connections for all tank openings shall be liquid tight.

(c) Tanks for storage of Class I or Class II liquids inside buildings shall be provided with either:

(1) A normally closed remotely activated valve,

(2) An automatic-closing heat-activated valve, or

(3) Another approved device on each liquid transfer connection below the liquid level, except for connections used for emergency disposal, to provide for quick cutoff of flow in the event of fire in the vicinity of the tank. This function can be incorporated in the valve required in subsection (b) above and, if a separate valve, shall be located adjacent to the valve required in subsection (b).

(d) Vents for tanks inside of buildings shall be as required in 3-2-1(c), 3-2-1(d), 3-2-2-5, except that emergency venting by the use of weak roof seams on tanks shall not be permitted. Vents shall terminate outside the buildings.

(1) Section 3-2-1(c)(5) requires that adequate ventilation exist to guarantee that flammable liquid vapors cannot build up to 25% percent or more of the lower flammable limit, including inside buildings.

(e) Vent piping shall be constructed and equipped as in 3-2-1(b) and 3-2-1(c).

(f) Openings for manual gauging of Class I or Class II liquids, if independent of the fill pipe, shall be provided with a vapor tight cap or cover. Openings shall be kept closed when not gauging. Each such opening for any liquid shall be protected against liquid overflow and possible vapor release by means of a spring-loaded check valve or other approved device. Substitutes for manual gauging include, but are not limited to, heavy-duty flat gauge glasses, magnetic, hydraulic, or hydrostatic remote reading devices, and sealed float gauges.

(g) The inlet of the fill pipe and the outlet of a vapor recovery line for which connections are made and broken shall be located outside of buildings at a location free from any source of ignition and not less than 5 ft. (1.5 m) away from any building opening. Such connections shall be closed and tight when not in use and shall be properly identified.

(h) Tanks storing Class I, Class II, and Class IIIA liquids inside buildings shall be equipped with a device, or other means shall be provided to prevent overflow into the building. Suitable devices include, but are not limited to, a float valve, a preset meter on the fill line, a valve actuated by the weight of the tank contents, a low head pump incapable of producing overflow, or a liquid tight overflow pipe at least one pipe size larger than the fill pipe, discharging by gravity back to the outside source of liquid or to an approved location.

(i) Tank openings provided for purposes of vapor recovery shall be protected against possible vapor release by means of a spring-loaded check valve or dry-break connections, or other approved device, unless the opening is pipe-connected to a vapor processing system. Openings designed for combined fill and vapor recovery shall also be protected against vapor release unless connection of the liquid delivery line to the fill pipe simultaneously connects the vapor recovery line. All connections shall be vapor tight.

3-2-2-7 Separation from Propane ASTs

(a) The minimum horizontal separation between an LP-Gas container and a Class I, Class II or Class IIIA liquid storage tank installed after September 30, 1994 shall be 20 ft (6 m). When flammable or combustible liquids storage tanks are within a diked area, the LP-Gas containers shall be outside the diked area and at least 10 ft (3 m) away from the centerline of the wall of the diked area. For all tanks, suitable measures shall be taken to prevent the accumulation of Class I, Class II, or Class IIIA liquids under adjacent LP-Gas containers such as by dikes, diversion curbs, or grading.

(b) Subsection (a) shall not apply when LP-Gas containers of 125 gal (475 L) or less capacity are installed adjacent to fuel oil supply tanks of 660 gal (2498 L) or less capacity. No horizontal separation is required between aboveground LP-Gas containers and underground flammable and combustible liquids tanks installed in accordance with UST rules.

3-2-3 Installation, Upgrade, and Repairs

(a) Application for Permit for ASTs

(1) An application must be submitted to and approved by the Director before beginning construction;

(i) On any new or used/reinstalled AST system that will store a regulated substance; or

(ii) Before beginning construction on any existing regulated substance AST system at a facility that is being upgraded to the standards described in these regulations or applicable statutes.

(A) This requirement applies to alterations made to tanks, piping, or equipment affecting their operation, to containment (diking or impounding), and to the security provisions of 3-2-1(i)(5) or (6).

[Note: Where a tank will be moved from and returned to its original location in order to allow an alteration to its containment (e.g., changing from bare earthen diking to lined earth or concrete diking), or where a tank will be moved to a new location outside of its current footprint, a permanent closure must be performed in accordance with 3-4-2, and an application must be submitted for its reinstallation. For tanks installed before October 1, 1994 that will be moved from and returned to their original location, requests for variance from separation requirements of 3-2-2 that cannot be met must be made in writing at the time of application.]

(2) The application must include:

(i) Site Plan - A dimensioned drawing of the facility, showing the name and address of the facility, the location of existing tanks and piping that will remain at the facility, as well as new tanks and piping proposed in the application, the location of dispensers and buildings at the facility, the location of loading/unloading facilities, the location of guard posts and fences, the location of property lines, and the location and names of streets adjacent to the facility; and

(ii) A written application, using the form supplied by the Director, containing information about the proposed construction.

[Note: If a used AST will be installed/reinstalled, the requirements of 3-2-3(d) apply, and the results of the required inspections and testing must be submitted with the application.]

(b) AST Facility Inspections Required

(1) Except in emergencies, if underground piping will be replaced or added to the AST system, the Director must be notified at least 72 hours prior to beginning the air pressure/soap solution test of the piping in order that an inspection of the system may be scheduled at that time. Emergency situations will be dealt with individually by the Director, possibly by delegation of the inspection.

(2) The Director will make an inspection of the AST system, to verify that the facility was constructed according to plan. This inspection will be as detailed as practicable, but does not exempt the owner/operator from certifying that the installation was made according to all the requirements of these regulations. The owner/operator shall provide the Director with a 72 hour notice prior to the filling of the tank system.

(c) Denial or Revocation of Permit

(1) An AST permit application may be denied or revoked if the AST installation or operation is not in conformance with these AST regulations or is not in conformance with all applicable sections of the National Fire Protection Association codes.

(2) An AST permit may be denied or revoked if the AST permit application is not complete or is determined to be inaccurate.

(3) An AST permit may be revoked if the AST installation or operation is not in conformance with the NFPA Codes in effect at the time of installation, and may be revoked for misrepresentation of facts in the application.

(4) An AST permit may be revoked if an inspection by the Director reveals that the construction performed is not in accordance with the installation plan submitted for approval; and may be revoked for failure to meet the operating or fire safety rules established by these regulations or established by the various provisions of the NFPA Codes that apply to the AST facility.

(5) An AST system permit is automatically revoked six months after the date of issue unless the Director grants an extension in writing.

(6) Six months or later, after an AST permit is issued, the permit may be modified by subsequent statutory or regulatory changes.

(d) Reinstallation of ASTs

(1) Used ASTs being installed to store a regulated substance must meet the following requirements:

(i) The AST itself must meet all of the fabrication, construction and performance requirements, and be equipped with all of the required equipment listed in 3-2 of these regulations.

(ii) The tank must be inspected per 3-3-4-2, and manufacturer reinstallation/relocation requirements.

(iii) The AST installation and registration requirements of 3-2-3 and 3-2-4.

(iv) Emergency relief vent devices must be tested and certified to be in good working order.

(e) Upgrading AST Systems

The deadlines for the upgrading of AST systems that existed prior to AST regulations being promulgated have expired. This section remains in this revision for historical reference.

(1) On or before December 22, 1996, AST systems must meet the requirements of these regulations or permanently close the tanks in accordance with these regulations. The following requirements take effect December 22, 1996:

(i) Each AST must be sound and have an emergency relief venting device which is equivalent to those described in these regulations. The owner/operator is required to provide proof that the tank meets this requirement.

(ii) Secondary containment methods or devices must be provided and in regular use at the facility as described in 3-3-1.

(iii) The facility must meet the security requirements of 3-2-1(i).

(2) By December 22, 1998 certain AST systems must be equipped with a solenoid valve or a vacuum-actuated shutoff valve, with a shear section as described in 3-2-1(g).

[Note: In applying these requirements, the following quotation will be carefully considered by the Director - "Existing plants, equipment, buildings, structures, and installations for the storage, handling or use of flammable or combustible liquids that are not in strict compliance with the terms of this code may be continued in use at the discretion of the Director provided they do not constitute a recognized hazard to life or adjoining property. The existence of a situation that might result in an explosion or sudden escalation of a fire, such as inadequate ventilation of confined spaces, lack of adequate emergency

venting of a tank, failure to fireproof the supports of elevated tanks, or lack of drainage or dikes to control spills, may constitute such a hazard."]

(f) Repairs Allowed

(1) If an AST system is damaged, it must be repaired to meet applicable requirements, or be properly closed. Owners/operators of AST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the AST system is used to store regulated substances.

(2) The repairs must meet the following requirements:

(i) Repairs to AST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory. [Note: The following codes and standards may be used to comply with this section: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines"];

(ii) Above ground metal pipe that has released product must be immediately repaired or replaced and appropriately tested. [Note: repaired piping that has previously contained flammable liquid must not be subjected to an air pressure test unless the piping has been completely cleaned and rendered vapor free]

(iii) Underground metal pipe sections and fittings connected to an AST that have released product as a result of corrosion or other damage must be replaced immediately and protected from future corrosion. Fiberglass pipes and fittings may be repaired in accordance with the equipment manufacturer's specifications.

(iv) Repaired AST underground piping must be tightness tested in accordance with 2-3-4-3(a)(2)(i) within 30 calendar days following the date of the completion of the repair. New replacement piping runs that have never contained product may be tested by an air pressure/soap bubble test at 1.5 times operating pressure if inspected and approved by the Director.

(3) If a release of regulated substance is identified during repairs to AST system equipment, the owner/operator shall report the release according to Article 4.

3-2-4 AST System Registration and Transfer of Ownership

(a) Registration and Notification for ASTs.

(1) AST Registration Required. All ASTs and facility data must be registered, re-registered or updated on a form provided by the Director, regardless of whether the ASTs and facilities are currently in service or in temporary closure, according to the following provisions:

(i) The registration form must be filled out as completely as possible by the owner/operator of the AST; and must include each tank owned or operated at the facility.

(ii) Owners/operators may provide notice for several tanks at a single facility using one notification form, but owners/operators who own or operate tanks located at more than one facility must file a separate notification form for each separate facility.

(2) Registration Timing. Each owner/operator of an AST must register each AST with the Director as follows:

(i) By July 1, 1993 if the tanks were not registered previously.

(ii) Within 30 calendar days after the first day on which any AST is actually used to contain a regulated substance.

(iii) This registration information must be updated within 30 calendar days after any additional tank construction, AST system upgrading, temporary or permanent closure, or changes in operation including a change of owner or operator, has been completed.

(iv) This registration must be renewed annually during the month designated by the Director, and during the same month in each succeeding year thereafter.

(3) Registration Fee Required. The owner/operator is required to pay an annual registration fee in the amount allowed by the current state law for each regulated tank owned or operated, until the regulated AST is permanently closed as in 3-4-2 or until the owner/operator has instituted a change-in-service to a substance other than a regulated substance as in 3-4-3.

(4) Tank Vendor Responsibility. Any person who sells a tank intended to be used as an AST must notify the purchaser of such tank of the purchaser's registration and registration fee obligations under this section.

Section 3-3 Operation

3-3-1 Spill and Overfill Protection

(a) General Requirements

(1) After December 22, 1996, facilities shall be provided so that any accidental discharge of any Class I, II or IIIA liquids will be prevented from endangering important facilities, and adjoining property, or reaching waterways, as provided for in subsections (b) or (c) except that tanks storing Class IIIB liquids do not require special drainage or diking provisions for fire protection purposes.

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

(i) Where electronic or mechanical gauges are used for determining tank volume (ground–level tape gauges, clock face gauges, etc.), the gauge shall be calibrated annually, per manufacturer instructions. These calibrations shall be documented and maintained.

(3) Spill and overfill prevention equipment is required for all ASTs installed after September 30, 1994. Means shall be provided for determining the liquid level in each tank and be accessible to the delivery operator. Specifically, for all ASTs installed after September 30, 1994 at service stations, and for all secondary containment type tanks without diking or impounding protection, the equipment shall automatically stop the delivery of liquid to the tank when the liquid level in the tank reaches 95 percent of capacity or sound an audible alarm when the liquid level in the tank reaches 90 percent of capacity.

(4) Delivery operations shall comply with the following requirements:

(i) The delivery vehicle shall be separated from any AST by at least 25 ft. (7.6 m) for class I liquids and by at least 15 ft. for class II and class III liquids, measured from the nearest fill spout or transfer connection.

(ii) Tank filling shall not begin until the delivery operator has determined tank ullage (available capacity) based on direct liquid level measurement converted to gallons or some equivalent method.

(A) Where spill and overfill prevention equipment that will automatically stop the delivery of liquid to the tank or sound an audible alarm that can be heard by the delivery operator described in 3-3-1-(a)(3) does not exist, tank ullage and the amount of product delivered must be documented and maintained.

(iii) For ASTs installed after September 30, 1994, a check valve and a shutoff valve with a quick-connect coupling or a check valve with a dry-break valve shall be installed in the piping at a point where connection and disconnection is made for delivery from the bulk delivery vehicle to the AST. This device shall be protected from tampering and physical damage.

(5) The owner/operator must report, investigate, and clean up any spills and overfills in accordance with Articles 4 and 5 of these Regulations.

(b) Remote Impounding.

Where protection of adjoining property or waterways is by means of drainage to a remote impounding area, so that impounded liquid will not be held against tanks, such systems shall comply with the following:

(1) A slope of not less than 1 percent away from the tank shall be provided for at least 50 ft. toward the impounding area.

(2) The impounding area shall have a net capacity not less than that of the largest tank that can drain into it plus an allowance for precipitation.

(3) The route of the drainage system shall be so located that, if the liquids in the drainage system are ignited, the fire will not seriously expose tanks or adjoining property.

(4) The confines of the impounding area shall be located so that, when filled to capacity, the liquid level will not be closer than 50 ft. from any property line that can be built upon, or from any tank.

(c) Impounding Around Tanks by Diking

Exception: Size and spacing requirements for dikes enclosing existing ASTs may be reduced or waived by the Director if he determines that there are equivalent safety measures at the facility.

When protection of adjoining property or waterways is by means of impounding by diking around the tanks, such system shall comply with the following:

(1) For ASTs installed after September 30, 1994, a slope of not less than 1 percent away from the tank shall be provided for at least 50 ft. or to the dike base, whichever is less.

(2) After December 22, 1996, the volumetric capacity of the diked area shall not be less than the greatest amount of liquid that can be released from the largest tank within the diked area, assuming a full tank. To allow for volume occupied by tanks, the capacity of the diked area enclosing more than one tank shall be calculated after deducting the volume of the tanks, other than the largest tank, below the height of the dike.

(3) For ASTs installed after September 30, 1994, to permit access, the outside base of the dike at ground level shall be no closer than 10 ft. to any property line that is, or can be, built upon.

(4) After December 22, 1996, walls of the diked area shall be of non-permeable earth, steel, concrete, or solid masonry designed to be liquid tight and to withstand a full hydrostatic head for enough time until any release therein can be cleaned up. For all AST dikes installed after September 30, 1994, the floor of the diked area must be impervious enough to contain the product for enough time until any release therein can be cleaned up. Earthen walls 3 ft. or more in height shall have a flat section at the top not less than 2 ft. wide. The slope of an earthen wall shall be consistent with the angle of repose of the material of which the wall is constructed. Diked areas for tanks containing Class I liquids located in extremely porous soils may require special treatment to prevent seepage of hazardous quantities of liquids to low-lying areas or waterways in case of spills.

(5) Except as provided in subsection (6) below, the walls of the diked area shall be restricted to an average interior height of 6 ft. above interior grade.

(6) Dikes may be higher than an average of 6 ft. above interior grade where provisions are made for normal access and necessary emergency access to tanks, valves, and other equipment, and safe egress from the diked enclosure.

(i) Where the average height of the dike containing Class I liquids is over 12 ft high, measured from interior grade, or where the distance between any tank and the top inside edge of the dike wall is less than the height of the dike, provisions shall be made for normal operation of valves and access to tank roof without entering below the top of the dike. These provisions may be met through the use of remote-operated valves, elevated walkways, etc.

(ii) Piping passing through dike walls shall be designed to prevent excessive stresses as a result of settlement or fire exposure.

(iii) For ASTs installed after September 30, 1994, the minimum distance between tanks and toe of interior dike walls shall be 5 ft.

(7) Where provision is made for draining water from diked areas, such drains shall be controlled in a manner so as to prevent flammable or combustible liquids from entering natural water courses, public sewers, or public drains. Control of drainage shall be accessible under fire conditions from outside the dike.

(8) Storage of combustible materials, empty or full drums, or barrels, shall not be permitted within the diked area.

(d) Secondary Containment Tanks may be installed without special drainage or diking if they are constructed to meet all the following requirements:

(1) The capacity of the tank shall not exceed 12,000 gallons for Class I liquids or 20,000 gallons for Class II and IIIA liquids; and

(2) All piping connections to the tank are made above the normal maximum liquid level; and

(3) Means are provided to prevent the release of liquid from the tank by siphon flow; and

(4) The outer tank must contain a release from any portion of the inner tank within the outer wall; and

(5) For ASTs installed after September 30, 1994, spacing between adjacent tanks shall be not less than three (3) feet (0.9 M); and

(6) Tanks that are not listed as UL 2085 Protected Tanks must be protected from collisions as described in 3-2-1(i); and

(7) The system must prevent spills by being equipped with:

(i) A check valve and a shutoff valve with a quick-connect coupling or a check valve with a dry-break valve which is installed in the piping at a point where connection and disconnection is made for delivery from the vehicle to any AST; or

(ii) If the delivery hose is connected directly to the tank, the fill line at the tank shall be equipped with a tight-fill device for connecting the hose to the tank to prevent or contain any spill at the fill opening during delivery operations; and

(8) ASTs must prevent overfills by means of equipment that will shut off liquid flow to the tank when the liquid level in the tank reaches 95% of capacity or sound an audible alarm when the liquid level in the tank reaches 90% of capacity.

(e) Secondary containment areas must be maintained free of accumulations of water, leaves, weeds, flammable material, non U.L. listed tanks or drums, and anything else that might interfere with the containment purpose of such areas.

3-3-2 Corrosion Protection

(a) Internal Corrosion Protection For ASTs Installed After September 30, 1994.

When ASTs installed after September 30, 1994, are not designed in accordance with the American Petroleum Institute, American Society of Mechanical Engineers, or the Underwriters Laboratories Inc. Standards, or if corrosion is anticipated beyond that provided for in the design formulas used, additional metal thickness or suitable protective coatings or linings shall be provided to compensate for the corrosion loss expected during the design life of the tank.

(b) External Corrosion Protection for ASTs installed after September 30, 1994.

For those portions of an AST system installed after September 30, 1994, including the product pipelines that normally contain regulated substances and are in contact with the soil or with an electrolyte that may cause corrosion of the AST system, tanks and piping must be protected by either:

(1) A properly engineered, installed and maintained cathodic protection system in accordance with recognized standards of design, such as:

(i) National Association of Corrosion Engineers Standard RP-01-69, *"Control of External Corrosion of Underground or Submerged Metallic Piping Systems"* ;

(ii) National Association of Corrosion Engineers Standard RP-02-85 *,"Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"* ; or;

(2) Approved or listed corrosion-resistant materials or systems, which may include special alloys, fiberglass reinforced plastic, or fiberglass reinforced plastic coatings.

(c) External Coating of all Elevated Tanks.

For installations where tanks and piping are not in contact with soil or with an electrolyte, corrosion protection may consist of an appropriate external coating.

(d) Cathodic Protection Requirements.

Owners/operators must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as a cathodically protected AST system is used to store regulated substances:

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

(2) Performance criteria - The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

(3) Periodic Inspections - AST systems with impressed current cathodic protection systems must be inspected every 60 calendar days to ensure that the equipment is running properly.

(e) Tanks that are not cathodically protected must be tested within 5 years after October 1, 1994; and once every two years thereafter by either;

(1) An external visual inspection, that includes the bottom of the tank, for corrosion or other visible damage; or

(2) A leakage test of any type approved by the Director; or

(3) An internal inspection for corrosion or other visible damage; or

(4) Comply with some other alternative test for corrosion or leakage as specified by and approved by the Director in the future.

3-3-3 Release Detection

(a) General Requirements for all AST Systems.

(1) ASTs that are not in contact with the ground or any electrolyte that might cause corrosion of the tank must be visually inspected at least once per month by operating personnel to detect any leakage from tank seams, connections, and fittings, including piping. Any such leakage must be repaired immediately and reported under the repair and reporting requirements of these regulations.

(2) ASTs, including metal supporting structures, that are in contact with the soil or that are in contact with an electrolyte that may promote corrosion of the tank must be inspected as in subsection (1) above and be protected from corrosion or tested periodically to prove that they are not seriously corroded, as described in 3-3-2(e).

(3) AST system piping that is not in contact with the soil or with an electrolyte that might cause corrosion of the piping must be inspected at least once each month to detect leakage from pipe seams, connections, and fittings. Any such leakage that may exceed the reportable quantity (25 gallons) must be repaired immediately and reported as in Article 4.

(4) Underground AST piping shall meet the release detection requirements in 2-3-4-3.

(i) Pressurized piping described in 3-2-1 (g)(1)(i) shall meet the release detection requirements (automatic leak detector and line tightness testing) in 2-3-4-3(a), except that where there is no pump installed between the tank and underground piping, the requirement for an automatic line leak detector in 2-3-4-3(a)(1) does not apply.

(ii) Suction piping described in 3-2-1(g)(1)(A) shall meet the release detection requirements in 2-3-4-3(b).

(5) Inventory control shall be performed and documented for all single-wall ASTs installed on earthen materials, and all ASTs connected to underground pressurized piping that is not being monitored for releases in accordance with 2-3-4-3(a)(2)(ii). Accurate daily inventory records shall be maintained and reconciled for all applicable storage tanks.

(b) Release Detection for Secondary Containment Tanks

Secondary Containment tanks that are installed without special drainage or diking according to 3-3-1(b) or (c) must be visually inspected at least once each month to ensure that there has been no failure of the outer wall of the secondary containment tank. An interstitial liquid detector or some other positive means of leak detection must be installed to detect leaks from the inner wall of the tank; and operation of that leak detector must be verified at least monthly. A record of the inspection must be maintained [See § 3-3-5].

(c) All AST system tank and piping fittings, connections, valves, auxiliary equipment that contains product, secondary containment areas, etc. must be maintained free of obstructions that would interfere with visual detection of leaks and spills.

3-3-4 Testing and Compliance Inspections

3-3-4-1 Testing

(a) Initial Testing

(1) All new ASTs shall be tested before they are placed in service in accordance with the requirements of the standard or code under which they were built.

(i) An AST marked with an approved listing is considered to be in compliance with this requirement, as the testing is part of the standard to which it was constructed. Tanks not marked with an approved listing shall be tested before they are placed in service in accordance with recognized engineering standards.

(b) Tightness Testing

(1) In addition to the initial testing of 3-3-4-1(a), all new and used tanks and connections shall be tested for tightness after installation/reinstallation and before being placed in service in accordance with manufacturer instructions, or NFPA 30 where no manufacturer instructions exist. This test shall be made at operating pressure with air, inert gas, or water.

(i) Air pressure shall not be used to test tanks that contain flammable or combustible liquids or vapors.

(ii) Where the vertical length of the fill and vent pipes is such that, when filled with liquid, the static head imposed on the bottom of the AST exceeds a gauge pressure of 10 psi, the tank and its related piping shall be tested hydrostatically to a pressure equal to the static head, using recognized engineering standards. Under no circumstances should the test pressure exceed the design pressure of the AST.

3-3-4-2 Inspections

(a) All steel ASTs shall be inspected and maintained in accordance with STI SP001, *Standard for the Inspection of Aboveground Storage Tanks*, or API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, whichever is applicable.

(b) Monthly Visual Inspections

The owner/operator must conduct visual inspections of the tank system each month and document the results of the inspection on a form provided by the Director or on an equivalent form. These monthly visual inspections satisfy the requirements described in 3-3-3 (a)(1) through (3).

(c) Annual Visual Inspections

(1) Annual inspections of all steel ASTs shall be performed, documented, and retained according to the requirements of STI SP001.

(i) This inspection does not include ultrasonic testing (UT), and can be performed by an individual knowledgeable of storage facility operations, the type of AST and its associated components, and characteristics of the liquid stored.

(ii) Annual inspections shall be performed within 12 months after April 14, 2011, and during the same month in each year thereafter.

(d) Periodic Inspections

(1) External and internal inspections, and leak testing, shall be performed and documented according to the requirements of the standard being followed.

(i) These inspections shall be performed by inspectors meeting the qualifications required by the standard being followed.

(ii) The applicability and frequency of these inspections is determined by the AST type, capacity, type of installation, corrosion rate, inspection history, and standard being followed according to guidance provided by OPS.

(iii) For any new or used AST being installed, and all existing ASTs, the first inspections and testing required by this subsection are due as indicated in Table 8 below.

[Note: For Table 8, inspection frequency shall be determined based on the requirements in the selected inspection standard listed in (c)(1).]

TABLE 8	First External and Internal Inspections, and Leak Testing Due				
Type of AST		***Age of AST***	***Previous inspections conducted?***	***Re-inspection due date is exceeded ?***	***The inspection is due***
AST Installations	New	at the time of installation is **new**	No	N/A	when the age of the AST = the inspection frequency
	Used	at the time of installation is ≤ the inspection frequency	Yes	Yes	before installation **
	Used	at the time of installation is ≤ the inspection frequency	Yes **	No	re-inspect per subsection (iv) below
	Used	at the time of installation is ≤ the inspection frequency	No	N/A	when the age of the AST = the inspection frequency
	Used	at the time of installation is > the inspection frequency	Yes	Yes	before installation **
	Used	at the time of installation is > the inspection frequency	Yes **	No	re-inspect per subsection (iv) below
	Used	at the time of installation is > the inspection frequency	No	N/A	before installation **
Existing		on 10/14/2012 is ≤ the inspection frequency	Yes	Yes	before 10/14/2012
Existing		on 10/14/2012 is ≤ the inspection frequency	Yes	No	re-inspect per subsection (iv) below
Existing		on 10/14/2012 is ≤ the inspection frequency	No	N/A	when the age of the AST = the inspection frequency
Existing		on 10/14/2012 is > the inspection frequency	Yes	Yes	before 10/14/2012
Existing		on 10/14/2012 is > the inspection frequency	Yes	No	re-inspect per subsection (iv) below
Existing		on 10/14/2012 is > the inspection frequency	No	N/A	before 10/14/2012

****A copy of the inspection report must be included with the installation application required by 3-2-3(a).**

(iv) Re-inspection of all ASTs shall occur in the same month as the previous inspection, during the next inspection year established by the applicable inspection frequency.

(e) The Director shall have authority to enter in or upon the premises of any facility that contains an AST system containing a regulated substance, for the purpose of verifying that such AST system and its required records are in compliance with these regulations.

3-3-5 Record Keeping

(a) Owners/operators must maintain the following records for an AST site as applicable:

(1) Installation permits for newly installed tanks, reinstalled used tanks or permits for upgrading existing tanks must be maintained for 5 years.

(2) Tank registration records or record of facility ID number retained until closure.

(3) Records of repairs that have been performed within the last 5 years.

(4) Monthly and annual visual inspection records of the AST system must be kept for one year. Formal inspection reports and supporting documents shall be retained for the life of the tank.

(5) Most recent underground piping precision test records must be maintained.

(6) Records showing the history of each AST in terms of which Class and type of product has been stored in that tank, shall be maintained for at least one year.

(7) Electronic/mechanical tank gauge calibration documentation required by 3-3-1(a)(2)(i) must be kept for one year.

(8) Tank ullage documentation required by 3-3-1(a)(4)(ii)(A) must be kept for one year.

(9) Inventory control records required by 3-3-3(a)(5) must be kept for one year.

(10) Free product removal records must be maintained to document proper operation following any release of product within the last five years.

(11) Records showing the changes in status of tanks that have been temporarily closed at times then returned to service, should be maintained for at least two (2) years. Records need not be kept for tanks that have been permanently closed.

(12) Records of the operation of the cathodic protection system including results of 60-day inspection as required in 3-3-2 (d)(3).

(b) Records must be maintained at the AST site and immediately available for inspection by the Director; or at a readily available alternative site and be provided for inspection within 24 hours to the Director upon request.

(c) Notwithstanding the above, to be eligible for the Fund, persons may be required to maintain the above or other records in accordance with Fund requirements.

Section 3-4 Closure of AST Systems

3-4-1 Temporary Closure

(a) Owners/operators shall notify the Director in writing at least 10 calendar days prior to placing an AST system in temporary closure, and at that same time submit records documenting the prior 12 months of monthly visual inspections, inventory control, ullage records, piping release detection records, and corrosion protection testing (if applicable) for tanks and piping. In lieu of submitting these records, the owner/operator may conduct a tightness test of the tanks and underground piping, and complete a site assessment as required by the Director, and submit these results with the temporary closure notification.

(b) Temporarily closed tanks must be emptied of liquid, rendered vapor free and safeguarded against trespassing by means of locked gates, fences etc. When an AST system is temporarily closed, owners/operators must continue the operation, maintenance, inspection, and testing of corrosion protection in accordance with these regulations. Because the tanks must be emptied, release detection is not required.

(c) When an AST system is temporarily closed, vent lines must be left open and functioning. If the temporary closure period is 3 months or more, all pumps, manways, ancillary equipment and lines other than vent lines must be capped and secured, unless an alternate schedule is approved by the Director.

(d) When an AST system is temporarily closed for more than 12 months, owners/operators must permanently close the AST system in accordance with 3-4-2, unless the Director provides a written extension of the 12-month temporary closure period. Before requesting this extension, owners/operators must complete a site assessment as required by the Director.

(e) Owner/operators shall notify the Director in writing no more than 30 calendar days prior to placing an AST back in service, and at that same time submit corrosion protection records (if applicable) for the period of temporary closure, and documentation of passing tightness tests for the AST conducted within the past 30 calendar days. The owner/operator shall obtain passing tightness tests for underground lines immediately upon introduction of fuel into the lines and submit documentation of testing to the Director within 10 calendar days.

(f) If an owner/operator operates a facility which has a specific period of time or season during the year when the tank system is empty, as described in (b) of this section, the requirements for maintaining corrosion protection and the following requirements below will apply:

(1) The owner/operator shall notify the Director that the facility does include seasonal operation on a form provided by the Director. If this information changes, the owner/operator shall complete and submit the form to the Director.

(2) The period may not exceed 6 consecutive months.

(3) The owner/operator shall maintain manifest documentation completed during emptying of the tank.

(4) At the end of the seasonal period, the owner/operator must conduct one of the following actions:

(i) Return the tank to service.

(ii) Place the tank into proper temporary closure. The owner/operator must notify the Director in writing within 10 calendar days, submit records according to (a) as applicable and complete requirements in (c) immediately.

(iii) Permanently close the tank as required by 3-4-2.

3-4-2 Permanent Closure

(a) Owners/operators shall notify the Director in writing at least 10 calendar days prior to placing an AST system in permanent closure, and at that same time submit records documenting the prior 12 months of monthly visual inspections, inventory control, ullage records, piping release detection records, and corrosion protection testing (if applicable) for tanks and piping.

Exception: Records do not need to be submitted where they have already been submitted as part of placing the tank into temporary closure as required by 3-4-1.

(b) Empty and clean the tank by removing all liquids and accumulated sludges as described in 3-4-5; and

(c) Clean out and plug both ends of all connected piping; and

(d) Remove all dispensers; and

(e) Render all connected loading facilities completely inoperative; and

(f) Safeguard the AST system from trespassing as described in 3-4-1, or remove the tanks from the facility; and

3-4-3 Change in Service

(a) Continued use of an AST system to store a substance other than a regulated substance is considered a change-in-service. Before a change-in-service, owners/operators must empty and clean the tank, connected piping, and any other equipment that previously contained a regulated substance as described in 3-4-5; then notify the Director in writing of the change of service.

3-4-4 Site Assessment

(a) Before an extension to temporary closure, permanent closure or a change-in-service is completed, or upon request by the Director for previously closed sites, owners/operators must measure for the presence of a release where contamination is most likely to be present at the site. In selecting sample types, sample locations, and measurement methods, owners/operators must consider the method of closure, the nature of the stored substance, the depth to groundwater, and other factors appropriate for identifying the presence of a release.

(1) For assessments when the tank system is removed during permanent closure, the owner/operator must collect soil samples from beneath each tank, beneath each dispenser island, beneath areas of piping, and beneath any loading racks.

(2) For assessments when the tank system is left in-place during permanent closure, prior to placing the tank into temporary closure, or when there is a change-in-service, the owner/operator shall collect samples of the type and at locations as specified by the Director. Samples collected at all sites must be analyzed for individual chemicals of concern (COC) as described in 5-2.

(b) If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered, owners/operators must report a release in accordance with Article 4.

(c) If the tank closure assessment does not identify a release, the owner/operator must submit documentation of the assessment to the Director within 30 calendar days of the tank closure.

[Note 1: Permanently closed or non-regulated ASTs may be returned to active regulated substance service only after meeting the reinstallation rules described in 3-2-3(d).]

[Note 2: These closure rules are the minimum required in Colorado; they do not preempt local fire district rules, local building codes, or local zoning rules. In fire districts where the Uniform Fire Code is in effect, the fire district may require that temporarily closed ASTs be removed or demolished.]

[Note 3: The following procedures may be used to comply with 3-4:

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

(B) American Petroleum Institute Publ. 2015A, *"Lead Hazard Associated with Tank Entry"* ;

(C) American Petroleum Institute 2015B*,"Cleaning Open Top and Floating Roof Tanks"* ;

(D) National Institute for Occupational Safety and Health *"Criteria for a Recommended Standard...Working in Confined Space"* may be used as guidance for conducting safe closures.]

3-4-5 Waste Handling

(a) All liquids and accumulated sludges must be removed and disposed of according to the rules adopted pursuant to the Solid Waste Disposal Regulations and the Colorado Hazardous Waste Regulations adopted by the Colorado Department of Public Health and Environment.

Section 3-5 Oil Pollution Prevention - SPCC Plan

The US EPA's SPCC rule regulates non-transportation-related onshore and offshore facilities that could reasonably be expected to discharge oil into navigable waters of the United States or adjoining shorelines. It is the responsibility of the facility owner/operator to make the determination whether the facility is subject to the requirements of the SPCC rule. This determination is subject to review by the EPA's Regional Administrator. All requests for information regarding SPCC should be directed to the US EPA.

Compliance with the US EPA's SPCC rule is required. Documentation used to demonstrate compliance with the US EPA's SPCC rule may be used to demonstrate compliance with this section.

ARTICLE 4 RELEASE IDENTIFICATION AND REPORTING

Section 4-1 Suspected Releases

The following conditions require reporting of a suspected release from a regulated UST or AST system to the Director within 24 hours by telephone (303-318-8547) or facsimile (303-318-8546). If outside normal working hours or on a weekend and emergency assistance is needed, call the emergency response number (877-518-5608) at the Colorado Department of Public Health and Environment:

(a) A failed line or tank tightness test.

(b) Unusual operating conditions such as the erratic behavior of product dispensing equipment.

(c) The presence of water in the tank if investigation results indicate the UST system is not liquid tight.

(d) Inventory loss as indicated by the release detection method (unless the release detection equipment is found to be defective, is immediately repaired, and the correctly operating release detection equipment does not identify a loss of fuel).

(e) Inconclusive or failed SIR results that are not overturned by the third-party SIR vendor within 24 hours of the receipt of the report from the vendor.

(f) Identification of a regulated substance in secondary containment:

(1) Under dispenser container (UDC), sump containments, tank or line interstitial space, when that regulated substance is in contact with a penetration point or damage (crack) to containment equipment.

(2) Spill prevention devices (spill bucket), when that regulated substance is in contact with a damaged portion of the device, or when damage to the bottom of the device is identified and the device is free of liquid.

(g) The discovery of released regulated substances at the site or in the surrounding area, such as the presence of contamination, free phase hydrocarbons, or vapors in soils, basements or utility lines, or the presence of contamination in surface, ground, well or drinking water when the source of the contamination is not known.

Section 4-2 Response to Suspected Releases

In response to a suspected release, the owner/operator shall:

(a) Perform a system test that determines whether a leak exists in that portion of the tank system that routinely contains product (i.e. tanks and attached delivery piping) or secondary containment devices (e.g. under dispenser containment) that is suspected of releasing regulated substance. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release. All system test results shall be submitted to the Director within 10 calendar days of the suspected release. If the system test has a failed result, a site check must be performed according to (b) of this section.

(b) Perform a site check, if stained soils, soils with petroleum odors, or field screening readings is the basis for suspecting a release (4-1(g)). Owner/operators must collect soil and groundwater samples for laboratory analysis as described in 5-2(a). These samples must be collected from appropriate locations and depths in the vicinity of the suspected source(s) (i.e. tanks, lines, dispensers) to determine if a release to the environment has occurred. All site check results shall be submitted to the Director within 30 calendar days of the suspected release.

Section 4-3 Confirmed Releases

The following conditions require reporting of a confirmed release to the Director within 24 hours by telephone (303-318-8547) or facsimile (303-318-8546). If outside normal working hours or on a weekend and emergency assistance is needed, call the emergency response number (877-518-5608) at the Colorado Department of Public Health and Environment.

(a) The site check or other sample analyses indicate a release (any detection of any chemical(s) of concern),

(b) A released regulated substances at the site or in the surrounding area is observed, such as the presence of fuel outside of the storage tank system, identification of contamination during routine inspections, system repairs, installation, replacement or other sub-pavement work, the presence of contamination, free phase hydrocarbons or vapors in soils, basements or utility lines, or the presence of contamination in surface, ground, well or drinking water when the source of the contamination is known to be the owner/operator's UST or AST system, or

(c) If a fuel spill or overfill of regulated substance of any volume is not cleaned up within 24 hours or if a fuel spill or overfill of regulated substance that exceeds 25 gallons is observed.

[Note: Pursuant to 40 CFR § 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under S~~s~~ections 102 and 1-03 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.]

ARTICLE 5 RELEASE RESPONSE

Section 5-1 Response to Confirmed Releases

The owner/operator of a regulated substance system shall, in response to a confirmed release, comply with the requirements of these regulations, which incorporate a risk-based corrective action (RBCA) approach. Any work performed or required under these regulations does not automatically qualify the owner/operator for reimbursement from the Petroleum Storage Tank Fund (PSTF). The obligation of the owner/operator responsible for the release remains with that owner/operator in the event that the tank system and/or property changes ownership.

5-1-1 Acute human health hazards

Upon discovery of a regulated substance on ground surface or surface water, or if a regulated substance has the potential to create a fire, explosion or acute health hazard, emergency response action shall be initiated immediately.

The owner/operator responsible for the release shall:

(a) Identify and mitigate fire, explosion, vapor and acute health hazards by contacting the local fire department or other first-responder and conducting other mitigation activities as capability allows;

(b) Identify and mitigate impacts to water supply wells, supply lines or surface intake;

(c) Initiate containment and removal of any free-phase hydrocarbons observed on the ground surface or surface water body; and

(d) Report identification of either (a), (b) or (c) of this subsection to OPS within 24 hours of discovery.

5-1-2 Chronic and secondary human health hazards and other environmental impacts

After abatement of any acute human health hazards, the owner/operator responsible for the release shall:

(a) Take action to prevent any further release into the environment;

(b) Identify the source of the release and repair, replace or upgrade the portion of the petroleum storage tank system that failed;

(c) Monitor and mitigate any health hazards posed by vapors or free-phase hydrocarbons that have entered into subsurface structures (such as sewers or basements); and

(d) Remedy hazards posed by contaminated media that are excavated or exposed as a result of abatement activities. The owner/operator must comply with applicable state and local requirements if these remedies include treatment or disposal of contaminated media.

Section 5-2 Site Characterization

The purpose of site characterization is to define the extent of source area(s) of the release, determine the distribution of contamination in the subsurface, determine if POEs are impacted or potentially impacted, evaluate all exposure pathways and determine whether active remediation is necessary~~required~~. Site characterization results must be submitted to OPS within 180 days of the release discovery in the report format provided on the OPS website.

Upon confirmation of a release and completion of emergency response, the owner/operator shall complete the following tasks.

(a) Define the extent of the source area(s) and determine the distribution and extent of sorbed, dissolved, vapor and free-phase contamination. Access must be obtained to off-site properties, including rights-of-way, if the extent of contamination extends beyond the release property boundary.

(1) Collect environmental samples to define the extent of contamination in the subsurface. Groundwater must be assessed unless there is reason to believe that it is not impacted and with the concurrence of the Director. ~~A quarterly monitoring program must be implemented upon installation of environmental wells.~~

(2) Laboratory analysis of samples shall be as follows.

(i) Soil samples:

(A) Benzene, toluene, ethyl benzene, xylenes (BTEX);

(B) The appropriate range(s) of total petroleum hydrocarbons (TPH);

(C) Priority poly-nuclear aromatic hydrocarbons (PAHs) must be analyzed for from the sample with the highest TPH concentration if TPH exceeds the Tier I screening level of 500 mg/kg; and

(D) Other petroleum fuel additives or petroleum compounds that are suspected to have been released.

(ii) Groundwater samples:

(A) BTEX, methyl tertiary-butyl ether (MTBE);

(B) The appropriate range(s) of TPH; and

(C) Other petroleum fuel additives or regulated compounds that are suspected to have been released.

(iii) Soil vapor samples:

(A) Benzene.

(3) Identify all concentrations relative to the Tier I risk-based screening levels (RBSLs) listed in Table 5-1.

Table 5-1. Tier I RBSLs.

Media	Complete Exposure Pathway	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
Surficial Soil [mg/kg]	Ingestion/ Dermal/ Inhalation	2.8	4,000	2,100	10,000	N/A
Subsurface Soil [mg/kg]	Leachate to Groundwater Ingestion	0.26	140	190	>Sat* or 260**	N/A
Soil Vapor [µg/m^3]	Indoor Air Inhalation	2,900	>VP	>VP	>VP	N/A

Groundwater [mg/l]	Indoor Air Inhalation	0.016	10	26	2.9	N/A
	Groundwater Ingestion	0.005	1.0	0.7	10* or 1.4**	0.020

> VP Denotes that even at a concentration equal to the vapor pressure of the chemical, a hazard quotient of 1 is not exceeded.
> Sat Denotes that even at a concentration equal to the saturation of the chemical, a hazard quotient of 1 is not exceeded.
N/A Not applicable. No established RBSL.
* This RBSL will be in effect for releases that occurred prior to September 14, 2004.
** This RBSL will be in effect for releases that occurred on or after September 14, 2004

(b) Collect site-specific geologic and hydro-geologic data.

(1) Determine the predominant lithology in the unsaturated and saturated zones;

(2) Determine the depth to water, hydraulic gradient and groundwater flow direction;.

(3) Determine the site-specific hydraulic conductivity; and

(4) Evaluate other geologic conditions that influence groundwater flow.

(c) Evaluate all exposure pathways and identify impacted or potentially impacted POEs.

(d) Calculate Tier II site-specific target levels (SSTLs) for on-site contamination. ~~and evaluate the need for active remediation.~~

~~(d)~~(e) Develop a Conceptual Site Model (CSM).

~~(e)(f)~~ ~~Obtain concurrence of the Director that active remediation is warranted and conduct appropriate pilot testing.~~ Evaluate the need for active remediation.

Section 5-3 Corrective Action

~~To remediate contamination identified during site characterization,~~ T~~t~~he owner/operator shall develop and implement a Corrective Action Plan (CAP) based on the need for remediation identified during Site Characterization. The purpose of the CAP is to develop an approach to reach cleanup goals of less than Tier I RBSLs at the impacted POEs and to Tier II SSTLs on-site and calculate the time frame to achieve the cleanup goals. A completed CAP report must be submitted to OPS within ~~60 days of the request~~ one year of the release discovery date in the report format provided on the OPS website. Proposed scope of work costs must be presented if the release event is eligible for reimbursement from the PSTF.

~~(a) Upon OPS approval of the Site Characterization Report and with OPS concurrence that:~~

~~(1)~~(a) If ~~A~~active remedial action is not warranted, the owner/operator shall:

~~(i)~~(1) Calculate the time frame to achieve the remediation goals utilizing site-specific natural attenuation rates;

~~(ii)~~(2) Present milestones to evaluate the natural attenuation progress; and

(3) Present a monitoring and reporting schedule.

~~(iii)~~

~~(2)~~(b) If ~~A~~active remedial action is warranted, the owner/operator shall:

(1) Define remedial objectives, identify targeted treatment areas, perform a remedial technology evaluation, and select a technically and economically feasible remedial approach.

(2) Identify and collect critical data needs (e.g., pilot testing) for the selected remedy(s).

~~(i)~~(3) ~~Extrapolate the pilot test data to p~~Prepare a full-scale remediation design;

~~(ii)~~(4) Calculate the time frame to achieve the remediation objectives~~goals~~;

~~(iii)~~(5) Present an implementation schedule;

~~(iv)~~(6) Present milestones to evaluate remediation progress; and

~~(v)~~(7) Present a monitoring and reporting schedule.

~~(b)~~(c) The owner/operator must implement the CAP immediately in accordance with the implementation schedule of the approved CAP, or as directed by the Director. The owner/operator must report the results of CAP implementation in accordance with a schedule and in a format approved by the Director. Any deviation from the approved CAP, including schedule revisions, must be approved by the Director.

Section 5-4 No Further Action Request

The owner/operator may request No Further Action (NFA) for a release when the owner/operator can demonstrate that contamination is at concentrations that are protective of human health and the environment at all POE(s) and that data collected confirms no future risk according to the RBCA process. NFA can be requested under Tier I and Tier II closure criteria at any time when the conditions are met. Tier III and Tier IV closure criteria will only be considered after corrective action measures have been implemented, contamination has been removed to the maximum extent practicable and all other closure conditions are met.

An NFA determination will be based on the empirical data provided, fate and transport modeling, current property use and exposure to known contamination. The release event may be re-opened if subsequent information indicates a change in exposure scenarios. OPS cannot release the owner or operator from any liability that may be associated with any contamination at or from this site.

In order to reduce the potential for risk of exposure to contamination, the owner/operator must contact OPS immediately if the function of the property is modified for a different use and the new use does not include dispensing of petroleum products.

ARTICLE 6 ENFORCEMENT

Section 6-1 Enforcement Program

The Director provides these regulations to assist owners/operators with safe and proper operation of regulated storage tank systems. When a facility is found to be out of compliance with these regulations (7 C.C.R. § 1101-14) and/or statutes (C.R.S. § 8-20 and 8-20.5), the Director will pursue enforcement actions against the owner/operator. The enforcement process will include requiring the owner/operator to make repairs and/or upgrades, perform system tests, keep records, and other actions to bring the facility back into compliance. During and following the enforcement process, the Director will continue to assist the owner/operator to remain in compliance. The enforcement process may include monetary penalties up to five thousand dollars ($5,000) per tank per day according to statute (C.R.S. § 8-20.5-107) if the enforcement obligations are not implemented according to the required schedule. Additionally, reductions to reimbursement amounts may be applied in accordance with Article 8.

6-1-1 Notice of Violation

(a) The Director may issue a Notice of Violation (NOV) when an owner/operator does not fully respond to actions as required by the Director:

(1) Request for records.

(2) Requested actions as indicated by Director's inspector.

(3) Request for reports or information regarding release identification or response.

(b) The Director may issue a NOV upon the discovery of a significant violation that poses an imminent threat to human health or safety or to the environment.

(c) Within ten (10) working days after a NOV has been issued, the owner/operator may file a written request with the Division Director for an informal conference regarding the NOV. If the owner/operator does not request an informal conference within this time frame, all provisions of the NOV shall become final and not subject to further discussion. If the NOV is not resolved within the time frame prescribed in the NOV, the Division Director may seek judicial enforcement of the NOV, or an Enforcement Order may be issued.

6-1-2 Enforcement Order

(a) An Enforcement Order may be issued when the violations included within a NOV or Settlement Agreement are not resolved within the prescribed time frame. The Enforcement Order may include increased fines up to five thousand dollars ($5,000) per tank for each day of violation. In addition, the Enforcement Order may include Delivery Prohibition (Section 6-2).

(b) Within ten (10) working days after an Enforcement Order has been issued, the owner/operator may file a written request with the Executive Director (or designee) for an informal conference regarding the Enforcement Order. If the owner/operator does not request an informal conference within this time-frame, all provisions of the Enforcement Order shall become final and not subject to further discussion. If the Enforcement Order is not resolved within the prescribed time frame, the Director may then seek judicial enforcement of the Enforcement Order.

6-1-3 Informal Conference

(a) Upon receipt of the request, the Director shall provide the owner/operator with notice of the date, time and place of the informal conference. The Director shall preside at the informal conference, during which the owner/operator and OPS personnel may present information and arguments regarding the allegations and requirements of the NOV or the Enforcement Order.

(b) Within twenty working days after the informal conference, the Director shall issue a Settlement Agreement in which the issues from the NOV and/or Enforcement Order will be upheld, modified or stricken. The Settlement Agreement will include a schedule of required activity for resolution of the violations. If the terms and/or schedule in the Settlement Agreement are not satisfied, either an Enforcement Order will be issued, re-issued, or the Director may seek judicial enforcement.

(c) The Settlement Agreement issued by the Director may be appealed within twenty working days to the Executive Director of the department. The Executive Director may either conduct the hearing personally or appoint an administrative law judge from the office of administrative courts in the department of personnel to conduct the hearing.

Section 6-2 Underground Storage Tank Delivery Prohibition

Delivery prohibition is an enforcement action prohibiting the delivery, deposit, or acceptance of product to an UST that has been determined by OPS to be ineligible for such delivery, deposit, or acceptance. For purposes of this section, the term "UST" means those tanks that satisfy the definition of UST in C.R.S. §8-20.5-101, except for those tanks identified in §8-20.5-101 17(b) and as defined in 2-1-1(b) as excluded or deferred storage tanks. These requirements apply to regulated substance USTs. OPS will prohibit delivery, deposit, or acceptance of product on an individual UST basis, instead of to every UST at a facility, except if warranted.

UST owners/operators and product deliverers are responsible for not delivering, depositing, or accepting product to a UST identified by OPS as ineligible to receive product.

6-2-1 Criteria for Delivery Prohibition

(a) Field Inspection: OPS shall prohibit delivery, deposit, or acceptance of product during an inspection if any of the following conditions exist.

(1) Required spill prevention equipment is not installed or functional.

(2) Required overfill protection equipment is not installed, or functional.

(3) Required leak detection equipment is not installed, or functional**.**

(4) Required corrosion protection equipment is not installed or functional.

(5) Failure to register or maintain current registration on an UST.

(6) Upon the discovery of a significant violation that poses an imminent threat to human health or safety or the environment. In addition to delivery prohibition, OPS may also require the removal of product from the tank:

(b) Enforcement Notice: OPS shall prohibit delivery, deposit, or acceptance of product if the owner/operator of that tank has been issued a written warning or citation (Settlement Agreement or Notice of Violation per C.R.S. § 8-20.5-107) under any of the following circumstances and the owner/operator has failed to take corrective action within the requested time frame**.**

(1) Inability to demonstrate proper operation and/or maintenance of leak detection equipment**.**

(2) Inability to demonstrate proper operation and/or maintenance of spill, overfill, or corrosion protection equipment.

(3) Discovery of a significant violation that poses an imminent threat to human health or safety, or to the environment. In addition to delivery prohibition, OPS may also require the removal of product from the tank.

6-2-2 Red Tag Mechanisms Used to Identify Ineligible USTs

Upon determination that any of the criteria for delivery prohibition have been met, including the discovery of a significant violation that poses an imminent threat to human health or safety or the environment, OPS will attach a red tag to each fill pipe of the ineligible UST clearly identifying the tank as ineligible for delivery, deposit, or acceptance of product. Before affixing a red tag to the fill pipe of an UST system, OPS shall document the level of stored product in the tank.

(a) The red tag will be attached to the fill pipe using a tamper-resistant wire seal so that the tag is visible to any person attempting to deliver a regulated substance to the UST.

(b) The tag shall be red in color and made of plastic or other durable and damage resistant material and shall bear the following information:

(1) The following wording, printed in white at the top of the tag in all capital letters in at least 36 point bold-faced type: "DELIVERY PROHIBITED!"

(2) The following wording, printed in white below the wording described in ~~subsection~~ Subsection (b)(1) in at least 16 point type: "Delivering a regulated substance, or removing, defacing, altering, or otherwise tampering with this tag may result in civil penalties of up to $5000 per day."

(3) Printed below the wording described in ~~subsection~~ Subsection (b)(2), the following wording in at least 16 point type: "If you have questions call OPS (303) 318-8547"

(4) Following the wording described above, there shall be a blank area at least 1/2 inch wide by four inches long in which the OPS inspector shall, at the time of placement, write legibly in permanent ink the date, facility identification number, product type, and the inspector's initials.

No owner or operator of a facility or delivery person may deposit or allow the deposit of a regulated substance into an UST system that has a red tag affixed to the system's fill pipe. Unless authorized by OPS, no person shall remove, deface, alter, or otherwise tamper with a red tag such that the information contained on the tag is not legible.

6-2-3 Notification Processes For UST Owners/Operators and Product Deliverers

(a) Immediately after affixing a red tag, OPS shall notify the operator, if present on site, of the significant violation(s) for which the red tag was issued, along with a written report noting the violations. OPS shall also request current owner/operator contact information for future notifications.

(b) Within 24 hours of affixing a red tag, OPS shall notify the owner in writing of the significant violation(s) for which the red tag was issued.

(c) Within 24 hours of affixing a red tag, OPS shall add the red tagged tank(s) to the OPS website list of facilities that have delivery prohibitions.

(d) If a permit is required by OPS in order to correct one or more significant violations identified, OPS shall, to the extent feasible, expedite its review and issuance of such permit(s).

6-2-4 Reclassifying Ineligible USTs as Eligible to Receive Product

(a) Upon notification by the owner or operator documenting to the satisfaction of OPS that there was not a significant violation or the significant violation has been corrected, or an emergency condition as described in 6-2-6 exists, OPS shall provide verbal and written authorization to the owner or operator to remove the red tag. If OPS disputes the notification provided by the owner or operator, then the procedural provisions of C.R.S. § 8-20.5-107 shall apply, except that the owner/operator may request and be entitled to an informal conference with the Director within three working days. A delivery prohibition required by a red tag shall remain in effect during the time that the procedural provisions of C.R.S. § 8-20.5-107 are invoked, unless the owner or operator requests and the Director grants a stay of the effect of the red tag.

(b) By close of business (5pm) on that same day, OPS will also remove that tank from the OPS website list of facilities that have delivery prohibitions.

(c) OPS may inspect the UST system within five working days of notification to determine whether the system continues to be in significant violation, regardless of whether it has authorized removal of the red tag by the owner or operator. If, upon inspection, OPS determines that the system is no

longer in significant violation and it has not already authorized removal of the red tag, OPS shall immediately remove the red tag.

(d) Upon removing a red tag from an UST system, OPS shall document the level of stored product in the tank. If the owner or operator removes a red tag pursuant to written authorization by the field inspector, the owner or operator shall document the level of stored product in the tank immediately after removing the red tag.

(e) A red tag that has been removed by the owner or operator shall be returned to the OPS within five working days, or sooner if requested by the field inspector.

6-2-5 Delivery Prohibition Deferral in Rural and Remote Areas

OPS may decide not to identify an UST as ineligible for delivery, deposit, or acceptance of product if such a prohibition would jeopardize the availability of, or access to, motor fuel in any rural and remote areas. However, OPS shall only defer application of delivery prohibition for 30 calendar days after determining that an UST is ineligible for delivery, deposit, or acceptance of product.

6-2-6 Delivery Prohibition Deferral in Emergency Situations

In emergency situations, the Director may decide not to identify an UST as ineligible for delivery, deposit, or acceptance of product if such a prohibition is not in the best interest of the public, even in the cases of significant and/or sustained noncompliance. In such emergency situations, OPS shall only defer application of delivery prohibition for up to 180 calendar days after determining an UST is ineligible for delivery, deposit, or acceptance of product.

6-2-7 Removal of Red Tag from Emergency Generator Tank Systems

OPS may remove or authorize the removal of a red tag from an emergency generator tank system before a significant violation has been corrected if OPS determines that an emergency situation exists requiring operation of the system and the delivery of petroleum is necessary for the continued operation of the system during the emergency.

ARTICLE 7 FINANCIAL RESPONSIBILITY REQUIREMENTS FOR OWNERS/OPERATORS OF PETROLEUM UNDERGROUND STORAGE TANKS

Section 7-1 Applicability

(a) Owners and operators of petroleum underground storage tanks are required to demonstrate compliance with the financial responsibility (FR) requirements in federal regulations by any of the mechanisms described in 40 CFR 280.94 through 280.103. Per C.R.S. § 8-20.5-206, FR is required for underground storage tanks. Per the June 2015 revision of EPA regulations, airport hydrant fuel distribution systems, UST systems with field constructed tanks, and UST systems that store fuel solely for use by emergency power generators must also demonstrate FR. Approved mechanisms per these Colorado regulations are described later in this article. FR is intended to ensure that adequate monies are available in the event of an accidental release from a petroleum storage tank system to provide for cleanup of the release (corrective action) and to potentially compensate impacted third parties for bodily injury and property damage resulting from the release. According to 40 CFR 280.93, the amount of FR required ranges from $500,000 up to $2 million depending on the type of facility, monthly throughput of petroleum product and number of tanks. If an owner or operator cannot meet the required deductible amounts listed in Article 8, another FR mechanism must be identified and obtained in order for the owner or operator to remain in compliance and continue operation of the storage tank system.

(b) This FR requirement applies to the following:

(1) Owners/operators of all petroleum UST systems except as otherwise provided in this section.

(2) If the owner and operator of a petroleum UST are separate persons, only one person is required to demonstrate FR; however, both persons are jointly liable for release cleanup and third-party damages, if neither person complies with Article 7.

(c) This FR requirement does not apply to the following:

(1) State and federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States.

(2) Owners/operators of any UST system described in 2-1.

Section 7-2 Financial Responsibility Mechanisms

Mechanisms to satisfy FR as described in 7-1 are listed below:

(a) 40 CFR Part 280.101 designates state funds as an approved mechanism. The Colorado Petroleum Storage Tank Fund, referred to in this section as the “Fund”, is an EPA approved Fund to provide FR to tank owners and operators in the State of Colorado. Moneys in the Fund, created pursuant to ~~section~~ C.R.S. Section ~~§~~ 8-20.5-103, may be used by certain owners and operators of petroleum storage tanks to demonstrate their compliance with the FR requirements in federal regulations.

(b) Owners and operators not eligible for access to the Fund shall be solely responsible for securing independent financial assistance, but may use any federally approved financial assurance mechanism identified in 40 C.F.R. 280.94 through 280.103 to help fund the cost of complying with such requirements. These federally approved mechanisms are as follows.

(1) Financial Test of Self-Insurance.

(i) An owner/operator may satisfy the requirements of C.R.S. § 8-20.5-206 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner/operator's net worth must be based on year-end financial statements for the latest fiscal year.

(ii) The fiscal year-end financial statements of the owner/operator must be examined by an independent certified public accountant and be submitted along with the accountant's report of the examination.

(iii) The owner/operator's year-end financial statements must not include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(iv) To demonstrate that it meets the financial test under this subsection the chief financial officer of the owner/operator must sign, within 120 calendar days of the close of each financial reporting year, a letter stating that the owner/operator has met the financial test for self-insurance covering USTs at the facilities listed. The letter must contain a list of the facilities covered, and the following information must be provided for each facility: the name and address of the facility, the number of tanks at the facility, the size of each tank and the regulated substance contained in each tank.

(v) If an owner/operator using the test to provide FR finds that he or she no longer meet**s** the requirements of the financial test based on the year-end financial statements, the owner/operator must obtain alternate coverage as described in this article within 150 calendar days of the end of the year for which financial statements have been prepared or within 30 calendar days of the date of the financial statement, whichever is earlier.

(vi) The Director may require reports of financial condition from the owner/operator at any time. If the Director finds, on the basis of such reports or other information, that the owner/operator no longer meets the financial test requirements of this subsection, the owner/operator must obtain alternate coverage within 30 calendar days after notification of such a finding.

(vii) If the owner/operator fails to obtain alternate FR within 60 calendar days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 calendar days of notification by the Director that he or she no longer meets the requirements of the financial test, the owner/operator must notify the Director of such failure within 10 calendar days.

(2) Insurance Coverage.

(i) An owner/operator may satisfy the requirements of C.R.S. § 8-20.5-206 by obtaining a liability insurance policy that conforms to the requirements of this section from a qualified insurer or risk retention group.

(ii) If the policy contains any type of deductible, the policy must state that the insurer will be liable for such deductible amount in the event of a default by the owner/operator.

(iii) Each insurance policy must be issued by an insurer that is authorized to transact the business of insurance or authorized to provide insurance as an excess or surplus lines insurer in Colorado. The insurer must be in compliance with all applicable regulations, policies and procedures of the Colorado Division of Insurance.

(iv) Each owner/operator must obtain a certificate of insurance from the insurer showing the name and address of each covered location, the policy number, period of

coverage, name and address of the insurer and the name and address of the insured for each facility covered by insurance. In the policy, the insurer must certify the following with respect to the insurance described herein.

(A) Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy to which this certificate applies.

(B) When requested by the Director, the insurer agrees to furnish a signed duplicate original of the policy.

(C) Notice of cancellation of the insurance by the insurer must be sent to the Director and to the insured at least 60 calendar days prior to the effective date of the cancellation of the insurance. However, if the cancellation is based on one or more of the following reasons, then such notice may be sent less than 60 calendar days prior to the effective date of the cancellation of the insurance: fraud; material misrepresentation; nonpayment of premium; or any other reason approved by the Commissioner of Insurance.

(D) The insurance covers claims for any occurrence that commenced during the term of the policy that is discovered and reported to the insurer within six months of the effective date of the cancellation or other termination of the policy.

(3) Letter of Credit.

(i) An owner/operator may satisfy the requirements of C.R.S. § 8-20.5-206 by obtaining an irrevocable letter of credit that conforms to the requirements of this section. The issuing institution must be an entity that has the authority to issue letters of credit in Colorado and whose letter of credit operations are regulated and examined by the Colorado Department of Regulatory Agencies.

(ii) The letter of credit must be irrevocable for a term specified by the issuing institution. The letter of credit must provide that credit be automatically renewed for the same term as the original term, unless, at least 90 calendar days before the current expiration date, the issuing institution notifies the Director by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 90 calendar days will begin on the date when the Director receives the notice, as evidenced by the return receipt.

(iii) The letter of credit must be payable to the Director and may be drawn on to cover corrective action and/or compensating third parties for bodily injury and property damage caused by accidental releases arising from operating the UST(s) identified in the letter of credit.

(iv) The letter of credit must list the name(s) and address(es) of the covered facility(ies) where the tanks are located, the number of tanks at each facility and the regulated substances contained by the tanks at each facility.

(4) Trust Fund.

(i) An owner/operator may satisfy the requirements of C.R.S. § 8-20.5-206 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by the Colorado Department of Regulatory Agencies.

(ii) The trust fund, when established, must be funded for the full required amount of coverage.

(iii) The trustee must be instructed to disburse funds from the trust fund to pay the costs of corrective action and/or third-party bodily injury and property damage only as directed or approved by the Director.

(5) Certificate of Deposit or Other Secured Financial Instrument.

A certificate of deposit or another financial instrument secured by an agency of Colorado or the US Government may be used to satisfy the requirements of C.R.S. § 8-20.5-206 provided that such financial instrument is made payable to the Director. Any interest or dividends payable by such instrument may be made payable to the owner/operator using this method of assuring FR. This financial instrument will be returned to the owner/operator by the Director only after the instrument has been replaced by an alternate FR mechanism or the owner/operator is released from the FR requirement under 7-3(f) below.

Section 7-3 Maintenance of Financial Responsibility

(a) Substitution of FR Mechanisms.

(1) An owner/operator may use any alternate FR mechanism specified above provided that at all times the owner/operator maintains an effective FR mechanism that satisfies the requirements of C.R.S. § 8-20.5-206.

(2) After obtaining alternate FR as specified in this Article 7, an owner/operator may cancel a prior FR mechanism by providing notice to the provider of FR.

(b) Cancellation by a Provider of FR.

If a provider of FR cancels or fails to renew for reasons other than incapacity of the provider as specified in ~~subsection~~ Subsection (c) below, the owner/operator must obtain alternate coverage within 60 calendar days after receipt of the notice of termination. If the owner/operator fails to obtain alternate coverage within 60 calendar days after receipt of the notice of termination, the owner/operator must notify the Director of such failure and submit:

(1) The name and address of the provider of FR;

(2) The effective date of termination; and

(3) The evidence of the FR mechanism subject to termination, maintained in accordance with ~~subsection~~ Subsection (d).

(c) Reporting by Owner/Operator.

(1) An owner/operator must submit current evidence of FR to the Director:

(i) Within 30 calendar days after the owner/operator identifies a release from an UST, which is required to be reported under Article 4.

(ii) Within 30 calendar days after the owner/operator receives notice of any of the following and fails to obtain alternate coverage as required by Article 7.

(A) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), US Code, naming a provider of FR as a debtor;

(B) Suspension or revocation of the authority of a provider of financial responsibility to issue a FR mechanism; or

(C) Any other incapacity of a provider of FR. or

(iii) As required by 7-2(b)(1) (vii) and 7-3 (b).

(2) An owner/operator must certify compliance with the FR requirements of Article 7 as specified in the new tank registration form when notifying the Director of the installation of a new UST under 2-2-3(f)(3).

(3) The Director may require an owner/operator to submit evidence of FR as described in ~~subsection~~ Subsection (d)(2) or other information relevant to compliance with Article 7 at any time.

(d) Record keeping.

(1) Owners/operators must maintain evidence of all FR mechanisms used to demonstrate financial responsibility for an UST until released under ~~subsection~~ Subsection (f). An owner/operator must maintain such evidence at the site or at the owner's or operator's place of business. Records maintained off-site must be made available upon request by the Director.

(2) An owner/operator must maintain the following types of evidence of FR:

(i) An owner/operator using a financial test of self-insurance must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent financial reporting year. Such evidence must be on file no later than 120 calendar days after the close of the financial reporting year or 30 calendar days from the date of the financial statement, whichever is earlier.

(ii) An owner/operator using a letter of credit must maintain a copy of the signed agreement and copies of any amendments to the agreement.

(iii) An owner/operator using an insurance policy must maintain a copy of the signed insurance policy, the certificate of insurance specified in ~~subsection~~ Subsection 7-2(b)(2)(iv) and any amendments to the policy.

(e) Drawing on FR Mechanisms.

(1) The Director shall require the insurer, trustee, or institution issuing a letter of credit or certificate of deposit to make available the amount of funds stipulated by the Director, up to the limit of funds provided by the financial responsibility mechanism if:

(i) The owner/operator fails to establish alternate FR within 60 calendar days after receiving notice of cancellation of insurance, letter of credit, or other FR mechanism; and

(ii) The Director determines or suspects that a release from an UST covered by the mechanism has occurred and so notifies the owner/operator or the owner/operator has notified the Director of a release from an UST covered by the mechanism.

(2) The Director may draw on these available funds when:

(i) The Director makes a final determination that a release has occurred and immediate or long term corrective action for the release is needed, and the owner/operator,

after appropriate notice and opportunity to comply, has not conducted corrective action as required; or

(ii) The Director has received either:

(A) Certification from the owner/operator, and the third-party liability claimant(s) and from the attorneys representing the owner/operator and the third-party liability claimant(s) that a third-party liability claim should be paid; or

(B) A valid final court order establishing a judgment against the owner/operator for bodily injury or property damage caused by an accidental release from an UST covered by FR under Article 7; and the Director determines that the owner/operator has not satisfied the judgment.

(f) Release from the Requirements. An owner/operator is no longer required to maintain FR under Article 7 for an UST after any necessary corrective action has been completed and the tank has been ~~properly~~ permanently closed or undergoes a change-in-service as required by these regulations.

(g) Bankruptcy or Other Incapacity of Owner/Operator or Provider of FR.

(1) Within 10 calendar days after the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), US Code, naming an owner/operator as debtor, the owner/operator must notify the Director by certified mail of such commencement and submit a list of all affected UST facilities.

(2) An owner/operator will be deemed to be without the required FR in the event of a bankruptcy or incapacity of its provider of FR, or a suspension or revocation of the authority of the provider of FR to issue an insurance policy, letter of credit, or other FR mechanism. The owner/operator must obtain alternate FR as specified in Article 7 within 30 calendar days after receiving notice of such an event. If the owner/operator does not obtain alternate coverage within 30 calendar days after such notification, the owner/operator must notify the Director immediately.

(h) Reestablishment of FR.

(1) Whenever the required amount of FR has been reduced by payment of claims due to a release at any facility, and the owner/operator is responsible for another facility or other facilities then the owner/operator must immediately reestablish the ability to pay the required amounts for any release at the other facility(ies).

(2) Whenever the required amount of FR for the owner/operator of a single facility has been reduced by payment of claims due to a release at a facility and the period of corrective action for that release has been completed, the owner/operator must then immediately reestablish the required amount of FR.

ARTICLE 8 PETROLEUM STORAGE TANK FUND

Section 8-1 Eligibility

(a) Only the following persons are potentially eligible for reimbursement from the Fund, provided they meet the other criteria:

(1) The current owner/operator of a regulated UST or AST system;

(2) Any past owner/operator of a regulated UST or AST system; or

(3) Other persons considered not responsible for the release as set forth in C.R.S. § 8-20.5-206 (3)(a) through (e) and CRS 8-20.5-303 (3)(a) through (e).

(b) Insurance companies or their agents are not eligible to make claims against the fund.

(c) An applicant making any claim against the Fund shall be held accountable for compliance with the following requirements.

(1) Each applicant must meet the owner/operator criteria for corrective action as established by the Director.

(2) When required by the Director, an owner/operator must demonstrate that accurate and complete records are maintained that confirm a release detected on or after July 1, 1989, except for those releases discussed in 8-1(g).

(3) Each owner/operator must have registered the tank(s) and paid the current and past annual tank registration fees. Payment penalties and percent reductions may be imposed by the Committee for non-payment or late payment of registration fees for each petroleum storage tank owned.

(4) Each owner/operator must have paid the environmental response surcharge applied to petroleum products in Colorado and must not be in default on any obligation caused by the environmental response surcharge.

(5) Each owner/operator must be in substantial compliance (as determined by the Committee) with all Colorado laws and regulations that address the handling, storage, record keeping, and dispensing of regulated substances, including but not limited to C.R.S. § 8-20-230, 8-20-231, all of 8-20.5, and Code 30 and Code 30A of the NFPA, to be eligible for participation in the Fund.

(6) Each owner/operator must demonstrate evidence of FR of $10,000 for corrective action and $25,000 for compensation of third-party personal injury or property damage through the mechanisms or combination of the mechanisms contained in the financial responsibility established by the Director and in C.R.S. Sections 8-20.5-206 and 303.

(7) Each owner/operator must demonstrate that allowable costs have exceeded the deductible (as described in ~~subsection~~ Subsection (6)) for assessment and corrective action per C.R.S. § 8-20.5-208, 209, and 304.

(8) Each owner/operator must comply with the criteria for reporting of a release to the Director, including but not limited to C.R.S. § 8-20.5-208.

(d) A mortgagee making any claim against the Fund shall comply with the following requirements:

(1) A mortgagee whose mortgage or deed of trust is dated before September 30, 1995 is eligible to participate in the Fund if the mortgagee has acquired, by foreclosure or receipt of a deed in lieu of foreclosure, the property on which the petroleum tank system is located and each of the following conditions has been met:

(i) The mortgagee has not actively managed the property during the period that it held a security interest;

(ii) The mortgagee has notified the Director of his/her acquisition of the property by certified mail (return receipt requested) or other documented delivery within 30 working days of the acquisition, if acquired after September 30, 1995;

(iii) The mortgagee has complied with all applicable corrective action requirements; and

(iv) The mortgagee is not affiliated with or related to the mortgagor.

(2) A mortgagee whose mortgage or deed of trust is dated on or after September 30, 1995, is eligible to participate in the Fund if the mortgagee meets all provisions of ~~subsection~~ Subsection (1) above and has a Certificate of Eligibility issued pursuant to ~~subsection~~ Subsection (3) below. There must be an operating petroleum storage tank system, which is not orphaned or abandoned, on the property at the time a Certificate of Eligibility is issued. A Certificate of Eligibility may be issued at any time before foreclosure or receipt of a deed in lieu of foreclosure; however, if the certificate is issued prior to the loan closing, the certificate will only be effective upon closing. A Certificate of Eligibility will not cover contamination detected on a property before the Certificate of Eligibility is issued.

(3) A Certificate of Eligibility may be issued to a mortgagee if the site is in compliance with all applicable laws, a Petroleum Storage Tank Status Sheet has been properly completed, and one of the following conditions has been satisfied:

(i) For a petroleum UST system:

(A) Documentation has been provided to the Director showing that all petroleum storage tanks and tank lines at the site passed a tightness test no more than 60 calendar days prior to the completion of the Petroleum Storage Tank Status Sheet; or

(B) Documentation has been provided to the Director showing tanks and lines at the site are monitored by a properly installed and operating third-party certified monthly monitoring device; or

(C) Documentation has been provided to the Director showing that an environmental site assessment performed no more than 60 calendar days prior to completion of the Petroleum Storage Tank Status Sheet indicates the site does not require site characterization or corrective action.

(ii) For an AST system, documentation has been provided to the Director showing that all underground lines at the site passed a tightness test no more than 60 calendar days prior to completion of the Petroleum Storage Tank Status Sheet and:

(A) The AST system meets the standards in 3-2-3(e) if installed before October 1, 1994;

(B) The AST system meets the standards for ASTs installed after September 30, 1994; or

(C) Documentation has been provided to the Director showing that an environmental site assessment performed no more than 60 calendar days prior to completion of the Petroleum Storage Tank Status Sheet indicates the site does not require initial site characterization or corrective action.

(4) A mortgagee who is eligible to participate in the Fund pursuant to these regulations may sell the property and transfer the Certificate of Eligibility to the buyer. The buyer may participate in the Fund pursuant to C.R.S. § 8-20.5-206 (3) and 303 (3) C.R.S., provided that:

(i) The buyer is not a former tank owner/operator of the site or an affiliate or relation to such a former tank owner/operator;

(ii) The buyer, within three months of acquiring the property from the mortgagee, completes and submits to the Director sufficient documentation to show that the site is in compliance with applicable regulations; or, within three months of acquiring the property, the Director approves a plan, submitted by the buyer, showing how and when the site will be brought into compliance; and,

(iii) Within six months of acquiring the property, the buyer either provides documentation to the Director showing that an environmental site assessment indicates the site does not require initial site characterization or corrective action, in which case the transferred Certificate of Eligibility is no longer a valid document; or, provides to the Director documentation that petroleum contamination is present on the property, in which case the transferred Certificate of Eligibility remains valid for the balance of the remediation, provided such remediation is conducted pursuant to Colorado statutes and regulations.

(e) Eligible Releases

Only releases satisfying all of the following criteria shall be considered eligible:

(1) The release must be accidental in nature;

(2) The storage tanks and related piping are regulated under these regulations and contain petroleum product regulated by these regulations;

(3) Subject to any Committee policies on reimbursement, the Director has approved the design for corrective action at the site; and

(4) Subject to any Committee policies on reimbursement, the Director has determined that the corrective action has, or when completed will have, adequately addressed the release in terms of protecting public health, welfare and the environment.

(f) Releases Not Eligible

Releases with the following criteria shall be considered not eligible:

(1) Releases from USTs and ASTs used to store petroleum products intended for aviation purposes.

(2) Releases from USTs and ASTs used to store petroleum products intended for use by railroad equipment or locomotives.

(3) Releases from USTs and ASTs that are exempt or deferred in 2-1-1(b) and (c) and 3-1(b).

(4) Releases at sites on the National Priorities List (NPL) or sites being cleaned up by the State under the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). Owners and operators of tanks containing regulated substances other than petroleum are not eligible to the Fund but must demonstrate FR using some other approved FR mechanism.

(g) Eligibility of Expenses

(1) Only expenses incurred on or after July 1, 1989 are potentially eligible for reimbursement. All expenses incurred before July 1, 1989 are not eligible for reimbursement.

(2) For releases detected on or after December 22, 1988 but before July 1, 1989, expenses incurred on or after July 1, 1989, are potentially eligible for reimbursement only if the original application was submitted before January 1, 1992. This January 1, 1992 deadline does not apply to applicants determined to bear no responsibility for the release pursuant to statute.

(3) Expenses related to releases detected before December 22, 1988 are not eligible for reimbursement.

(4) Expenses related to tanks closed in place or removed before December 22, 1988 are not eligible for reimbursement. This December 22, 1988 deadline does not apply to applicants determined to bear no responsibility for the release pursuant to statute.

(h) In addition to the above, the following subsections apply to all ASTs,

(1) The Director will make positive eligibility recommendations to the Committee for facilities that were in operation prior to October 1, 1994 provided that:

(i) Existing ASTs were installed and operated in substantial compliance with the applicable statutes and regulations that were in effect at the time the tank system was installed; and

(ii) Existing ASTs that were required to prepare and implement a "Spill Prevention, Control and Countermeasures" (SPCC) plan as specified in the 40 CFR Part 112 were in substantial compliance with that requirement.

[Note: Installation and operating rules can be found in NFPA Codes 30 and 30A that were in effect at the time of installation.]

(2) The Director will also make positive eligibility recommendations to the Committee for facilities that were in operation prior to October 1, 1994, that are not able to demonstrate 100% compliance with the regulations in effect at the time the ASTs were installed, provided that:

(i) There are no serious safety violations, and the safety concerns listed here are satisfied.

(A) Adequate ventilation, either natural or forced must exist to guarantee that flammable liquid vapors cannot build up to 25% of the lower flammable limit anywhere because of the presence of the tank facility in question.

(B) Normal vent lines must be of sufficient capacity to ensure that no fuel drop will cause the pressure inside the tank to exceed the test pressure. A spark arrester cap is required at the end of the vent line and it must be located "in the clear" and at least 12 feet above ground level.

(C) A label such as U.L. 142, UL ABOVEGROUND TANK, or equivalent must be attached to the tank to verify that it meets the emergency relief venting requirement of NFPA 30.

(D) Adequate spill control, overfill prevention control, and secondary containment methods or devices must be provided and in regular use at the facility; and

(ii) A SPCC plan, if required for the facility, has been developed, approved and followed.

(3) The Director will consider closure of a facility and/or removal of non-compliant tanks to be a mitigating factor in making the recommendation to the Committee.

(4) Nothing herein shall be construed to prevent the Committee from imposing percentage reductions upon applicants who are in substantial compliance with regulations but not in total compliance.

Section 8-2 Reimbursement

(a) The owner/operator of the petroleum storage tanks from which a release has occurred, or another person eligible pursuant to statute, and for which corrective action has been performed, or his duly authorized agent; may file an application for reimbursement.

(b) An application for reimbursement shall include a completed application form provided by the Director and shall contain the following:

(1) Legible copies of invoices according to the format required by the Director.

(2) The application shall provide proof of payment of invoices as follows:

(i) The amounts shown on the invoices for which reimbursement is requested have been paid in full by the applicant according to one of the following methods;

(A) Business receipts, indicating payments received;

(B) Fronts and backs of cancelled checks;

(C) The certification of a certified public accountant that the expenses for which reimbursement is requested have been paid in full;

(D) Provided the parties are unaffiliated and unrelated, a notarized affidavit signed by the person that performed the corrective action affirming that the amounts which the applicant represents as being paid were paid in full; or

(ii) Provided the parties are unaffiliated and unrelated, a notarized affidavit stating that the invoices relative to the referenced application for reimbursement from the Fund will be paid in full by the applicant upon receipt of the reimbursement in accordance with a promissory agreement.

(3) Any other information which the Committee may reasonably require.

(c) Subject to Committee policies regarding reimbursement, all applicants must comply with all corrective action requirements and a corrective action plan (including a technical and economic feasibility summary) must be approved before costs, associated with the corrective action, are eligible. The applicant can be required to provide proof that all corrective action requirements have been met.

(d) The applicant may file the application at any phase of the corrective action subject to any policies adopted by the Committee.

(e) Incomplete submittals shall suspend processing of applications.

(f) Technical information may be required by the Committee or the Director as part of any application for reimbursement:

(1) A detailed account of what corrective action has been taken, why specific actions were taken, when, by whom, and with what results.

(2) An estimate of other corrective action measures that may be required to remediate the facility and the estimated time required to complete such measures.

(3) Line and tank tightness tests, release detection and release prevention records. These records may include time periods ranging from six months to three years prior to a release or detection of contamination.

(4) Documentation that a release being cleaned up is not a new release requiring payment of a separate deductible, if the Director or the Committee has any information indicating a separate release may have occurred.

(g) Applications for reimbursement shall be submitted according to the electronic format and location as required by the Director and by hard copy to:

Petroleum Storage Tank Committee
Department of Labor and Employment
Division of Oil and Public Safety
633 17th St, Ste 500
Denver, CO 80202-3610

(h) The date of filing of any document shall be the receipt date stamped on the document.

Section 8-3 Allowable Costs

(a) Allowable costs are those costs and expenses which arise directly from the performance of necessary corrective action in accordance with the requirements of the Director and are deemed reasonable by the Committee subject to the limitations prescribed by this section.

(b) Allowable costs shall include but not be limited to the following:

(1) Abatement of impacts and immediate threats of impact to human health, safety, and the environment;

(2) Temporary provision of a water supply utilized specifically for domestic consumption;

(3) Collection and analysis of surface and subsurface soil and water, free phase hydrocarbons, and vapor samples;

(4) Emplacement of soil borings and/or monitor wells for remediation purposes;

(5) Removal, storage, treatment, recycling, transport, and disposal of free phase hydrocarbons, vapors, contaminated soils, contaminated water in accordance with applicable laws;

(6) Removal and disposal (including transport) of soils and pavement where removal is necessary to the performance of corrective action;

(7) Identification and testing of affected or potentially affected drinking water sources;

(8) Design of plans for site assessment and remediation;

(9) Permitting, acquisition, installation, startup, operation and maintenance of site assessment and remediation systems, including monitoring;

(10) Temporary relocation of utility structures when necessary to the performance of corrective action;

(11) Preparation of technical reports required pursuant to the requirements of these regulations;

(12) The fair market value of access to property outside of the facility boundaries where such access is necessary for the performance of corrective action;

(13) Performance of any corrective action measure, which is specifically required by a section of these regulations, or an order of the Director, or a written request or confirmation by the Committee;

(14) Equipment costs which are related solely to remediation. If the costs of the equipment is reimbursed by the Fund, when the equipment is no longer needed any salvage value of the equipment shall be returned to the Fund.

(15) Bodily injury or property damage suffered by third parties.

(16) Any other costs determined by the Committee to be allowable in accordance with the provisions of these regulations.

(17) Costs associated with preparing and filing an application for reimbursement not to exceed 1% of the net allowable reimbursement per application up to a maximum of $2,000 per event.

Section 8-4 Unallowable Costs

(a) Costs and expenses which are not applicable to the performance of necessary corrective action in accordance with the requirements of the Director or are deemed unreasonable by the Committee are unallowable for reimbursement.

(b) The following types of costs are not allowable for reimbursement.

(1) The cost of replacement, repair, maintenance, testing and upgrading of affected tanks and associated piping.

(2) The loss of income or profits, including without limitation, the loss of business income arising out of the review, processing, or payment of an application or request for assistance under these regulations.

(3) Decreased property values.

(4) Bodily injury or property damage except for injuries or damages suffered by third parties.

(5) Fees for legal services.

~~(6) Any costs associated with prosecuting an application for reimbursement under these regulations.~~ .

(7) The costs of making improvements to the facility beyond those that are required for corrective action.

(8) Costs, including those associated with contamination assessments performed, for any purpose other than investigating the extent and impacts of a release, where no corrective action is required by Colorado statutes and regulations.

(9) Costs of compiling and storing records.

(10) Any activities, including those required by these regulations, which are not conducted in compliance with applicable state and federal environmental laws, including laws relating to the transport and disposal of waste.

(11) Penalties or payment for damages assessed by the Committee, Director, the Department of Public Health and Environment, and/or the Federal government.

(12) At the Committee's sole discretion, claims for reimbursement relating to a tank owned or operated by a person who has been convicted of a violation of any law or rule that relates to the installation, operation, or management of petroleum storage tanks.

(13) Costs in excess of those considered reasonable by the Committee.

(14) At the Committee's sole discretion, cleanup costs resulting from negligence or misconduct on the part of the owner/operator or applicant.

(15) Subject to Committee policy, costs incurred during the closure of a tank

(16) Costs for the rental of equipment owned by the applicant if the equipment was previously reimbursed by the Fund.

(17) Interest paid on loans.

(18) Costs that are a part of normal business expenses (i.e. insurance charges).

(c) Any attempt by an applicant to claim reimbursement under circumstances when the applicant knew or should have known (this includes knowledge held by the applicant's environmental consultant) that some or all costs would be unallowed authorizes the Committee to reduce otherwise allowable costs submitted by the applicant (whether on the same or a different application). Any reduction imposed under this section shall be equal to the amount of the unallowed costs. This subsection applies only to the unallowed costs in ~~subsections~~ Subsections 8-4(b)(1), (6), (7), (8), (11), (15) and (16) above and only to applications received after March 1, 1997.

Section 8-5 Committee Review of Application

(a) The Committee shall review each eligible original application received and make a determination of reimbursement, inform the applicant of its determination and, as appropriate, reimburse the applicant from the Fund.

(b) Prior to approval of reimbursement, the Committee shall affirmatively determine that:

(1) Requested reimbursement expenses are:

(i) Eligible costs;

(ii) Reasonable as determined by the Committee;

(ii) Actually, necessarily incurred for the preparation or implementation of a corrective action plan approved by the Director or for eligible third-party damages.

(2) The applicant is:

(i) Eligible for reimbursement; and

(ii) In substantial compliance with all applicable rules and regulations.

(c) An application which does not contain all of the information required, may be rejected by the Committee, without prejudice. Rejection of the application by the Committee does not prevent the applicant from filing another application for the same release.

(d) The Committee is not required to commence the substantive review of an application until receipt of all information required from the applicant and the Director determines the application is properly and fully completed.

(e) If during the course of the substantive review, additional information of the type required by these regulations is needed to evaluate the application, the applicant may be required to provide such additional information. Further review of the application may be suspended until such information is received.

(f) The Committee's approval of the proposed corrective action(s) shall not be considered a finding or guarantee of safety or effectiveness of the plan(s). Nothing in these regulations shall be construed to abrogate or limit the immunity or exemption from civil liability of any agency, entity or person under any statute including the Colorado Governmental Immunity Act, Article 10 of Title 24 or C.R.S. § 13 21 108.5.

(g) The approval and disbursement of funds by the Fund and/or Committee does not constitute transfer of ownership of any contaminated soils, equipment, or related items relating to corrective action. Ownership of any and all items relating to corrective action will remain the property of the applicant.

(h) Multiple releases at a facility may be considered by the Committee either as single or separate releases to make the most efficient use of the Fund or to provide the most effective protection to human health or the environment.

Section 8-6 Fund Payment Report

(a) Upon completion of the review of an application, the Committee shall prepare a Fund Payment Report (FPR) indicating which of the applicant's costs the Committee believes should be reimbursed and which costs should not be reimbursed. If the Committee finds that any cost should not be paid to the full amount requested, it shall briefly state the reasons in its report. The Committee shall submit a copy of its report to the applicant.

(b) The applicant shall review the FPR and shall, if dissatisfied with any facts therein, file a written protest with the Committee within 60 calendar days of the date of the FPR. If the applicant does not file a written protest within the 60 calendar days, the applicant will have waived his/her right to object to anything covered by the FPR. After the 60 calendar days, everything regarding the application, including the amount of reimbursement and percentage reductions (including any reductions applicable to future applications), will be deemed final. However, costs determined to be not eligible cannot be protested.

(c) The protest of the FPR must be signed by the applicant and contain any information required by the Committee or the Director, including a clear statement of each item which the applicant disputes on the FPR.

(d) The protest shall be submitted on a form provided by the Committee or the Director.

Section 8-7 Miscellaneous Regulations

(a) Nothing in these regulations precludes the Committee or the Director from issuing orders, assessing administrative penalties, or taking any other action permitted by law against any person for violation of any statute, regulation or order.

(b) Nothing in these regulations changes the responsibilities of an owner/operator of a storage tank to respond to a release of regulated substances or to comply with any other state or Federal requirements, statutes, regulations or orders.

(c) No person shall knowingly submit false information to the Committee as part of any materials required to be submitted under these regulations.

(d) If an applicant owes money to the Fund or to the Director, including but not limited to penalties or past due registration fees, or owes money to any other State agency via the Vendor Offset Subsystem pursuant to CRS § 24-30-202.4, the amount owed will be deducted from any proposed reimbursement amount to the applicant.

ARTICLE 9 PETROLEUM CLEANUP AND REDEVELOPMENT FUND (REDEVELOPMENT FUND)

Section 9-1 Redevelopment Fund Purpose

The Redevelopment Fund is administered by OPS.

(a) The Redevelopment Fund will enable investigation and cleanup of petroleum contamination at petroleum storage tank sites that are not eligible for reimbursement from the Petroleum Storage Tank Fund (PSTF). Cleaning up these sites will minimize risk to Colorado's groundwater resources and enhance the potential for these properties to be redeveloped or reused.

(b) Redevelopment Fund monies are available in the form of reimbursement to property owners upon completion of one or more of the following approved activities:

(1) Petroleum UST removal.

(2) Site assessment to determine if contamination from petroleum storage tanks is present on the property (Level I activity).

(3) Site characterization if petroleum contamination is discovered on the property (Level II activity).

(4) Cleanup of the petroleum contamination (Level III activity).

(c) This article includes sections pertaining to eligibility criteria, eligible activities, the application and funding process, establishing project costs and required cost-matching for assessment and cleanup actions. Additionally, this article defines the mechanism for distributing monies from the Redevelopment Fund.

Section 9-2 Eligibility Criteria

(a) Eligibility to participate in the Redevelopment Fund is dependent on the applicant satisfying all of the following criteria:

(1) Applicant is the current property owner.

(2) Applicant can provide evidence that petroleum storage tanks are present or existed on the property.

(3) Applicant is not eligible for reimbursement from the PSTF.

(4) Applicant has a plan for redevelopment or reuse of the property.

Section 9-3 Eligible Activities

(a) Petroleum UST Removal

(1) Approved applicants shall be eligible for up to $2,000 in reimbursement of direct costs associated with each petroleum UST removed.

(2) Requests for reimbursement can be made at any time following the documented completion of the tank removal.

(b) Level I Site Assessment

(1) The Level I site assessment to measure for the presence of a petroleum release from a storage tank system is considered an eligible activity. To meet the requirement to obtain a NFA determination, the petroleum storage tank area, product line and dispenser locations must be evaluated.

(2) All proposed work conducted in Level I must be clearly identified in a project work plan prior to beginning the assessment activities. The work plan shall include a budget projection and estimated project completion timeline. Work plans shall be submitted prior to conducting Level I activities.

(3) All approved applicants shall be responsible for 10% of the Level I site assessment costs, which will be deducted from the reimbursement award.

(4) The maximum amount payable from the Redevelopment Fund for a Level I site assessment is $20,000.

(c) Level II Site Characterization

(1) The Level II site characterization to establish the extent of petroleum contamination that exceeds the current OPS Tier 1 RBSLs and a simple activity, such as limited excavation of petroleum-impacted soils or the development of a cleanup corrective action plan, are considered eligible activities.

(2) All proposed work conducted in Level II must be clearly identified in a project work plan prior to beginning the characterization activities. The work plan shall include a budget projection and estimated project completion timeline. Work plans shall be submitted prior to conducting Level II activities.

(3) All approved applicants shall be responsible for 10% of the Level II site characterization costs, which will be deducted from the reimbursement award.

(4) The maximum amount payable from the Redevelopment Fund for a Level II site characterization is $30,000.

(d) Level III Cleanup

(1) The Level III cleanup activities associated with an economically and technically feasible approach to mitigate petroleum contamination to an acceptable level are considered eligible activities.

(2) Requests for cleanup funding must include a project work plan that contains a discussion of the project technical feasibility and cleanup goals, budget projection and estimated project completion timeline.

(3) All approved applicants shall be responsible for 50% of the Level III cleanup costs, which will be deducted from the reimbursement award.

(4) The maximum amount payable from the Redevelopment Fund for a Level III cleanup is 50% of the eligible cost or $500,000, whichever is less.

Section 9-4 Application Process

(a) Applications for environmental assessment, characterization and cleanup financial assistance can be submitted at any time utilizing application forms posted on the OPS website. Applications will be periodically reviewed and evaluated based on the applicant's ability to demonstrate the following:

(1) Project plan results in reducing risk to the environment from petroleum contamination.

(2) Applicant has the ability to meet Level I and II deductibles and has leveraged matching funds for Level III cleanup activities.

(3) Redevelopment or reuse plan generates a positive economic and/or social impact on the community.

(b) Successful applicants will be notified at least quarterly, subject to the availability of money in the Redevelopment Fund.

(c) Applicants from the same corporate family are not eligible for awards at more than one property per year.

Section 9-5 Eligible Costs and Reimbursement

(a) Costs associated with eligible activities completed during the application process and subsequent project site assessment, characterization and cleanup will be reimbursed.

(b) In general, project costs shall not exceed the current Reasonable Cost Guideline unit rates.

(c) Requests for reimbursement must include the following:

(1) Documentation of the work performed per project work plan.

(2) Proof of payment for all invoices submitted for reimbursement.

(3) Affidavit of work performed, with regards to services, material, and equipment procured by the applicant.

(d) Reimbursement of Level III cleanup costs shall be contingent upon completion of project milestones in the approved cleanup work plan.

Section 9-6 Contractual Agreements

Property owners that are eligible for Level I, II and III activities shall enter into a contractual agreement with OPS for the appropriate level. Upon execution of a contractual agreement, OPS will issue the property owner a notice to proceed that affirms a commitment to reimburse a specified amount of money from the Redevelopment Fund.