

**COLORADO DEPARTMENT OF
LABOR AND EMPLOYMENT**

DIVISION OF OIL AND PUBLIC SAFETY

STORAGE TANK REGULATIONS

7 C.C.R. 1101-14

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DIVISION OF OIL AND PUBLIC SAFETY

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

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ARTICLE 1 GENERAL PROVISIONS

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, other than material classified as hazardous wastes under Subtitle C of the U.S. Solid Waste Disposal Act and to describe the financial responsibility of petroleum storage tank owners/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.

The 1999 amendments to these regulations incorporate an adaptation of the American Society of Testing and Materials Standard E 1739-95 into the requirements of Article 5 of these regulations. These amendments are intended to facilitate the incorporation of risk-based contaminant screening levels into the process of investigating and remediating petroleum releases.

The 2008 amendments to these regulations incorporate the UST provisions of the Federal Energy Policy Act of 2005. These amendments include secondary containment and installer certification requirements for new and upgraded UST systems, delivery prohibition provisions and UST operator training requirements.

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, the American Society of Testing and Materials, and by studies made by or at the behest of the U.S. Environmental Protection Agency. They represent the consensus of opinion of informed persons, as to the best methods for reducing hazards, posed by storage tanks, to acceptable levels.

1-3 Statutory Authority.

The amendments to these regulations have been created pursuant to Title 8 Article 20.5 Sections (202) and (302) of the Colorado Revised Statutes.

1-4 Effective Date.

These amended rules shall be effective on April 30, 2006 2008. The prior editions of the combined UST/AST regulations were published 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.

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:

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

- (2) "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.
- (3) "AST" means an aboveground storage tank, which is not permanently closed.
- (4) "AST system" means all ASTs at a facility, all the connected piping and ancillary equipment, all loading facilities, and all containment systems if applicable.
- (5) "Atmospheric Tank" 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.
- (6) "Attenuation" is the reduction in concentrations of chemical(s) of concern in the environment with distance or time due to processes such as diffusion, dispersion, adsorption, chemical degradation, biodegradation, and other similar chemical, biological, or physical processes.
- (7) "Belowground release" means any release to the subsurface of the land and/or to groundwater. This includes, but is not limited to, releases from the belowground portions of an AST or UST system, and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an AST or UST system.
- (8) "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.
- (9) "Bulk Plant" 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.]
- (10) "Capillary fringe" is the zone immediately above the water table, where water is drawn upward by capillary attraction.
- (11) "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.
- (12) "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.
- (13) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.
- (14) "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.
- (15) "Chemicals of concern" (COCs) are chemical compounds that have been identified for evaluation due to specific risks to human health and/or the environment.
- (16) "Committee" means the Petroleum Storage Tank Committee created in C.R.S. § 8-20.5-104.

- (17) "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.
- (18) "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.
- (19) "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.
- (20) "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.
- (21) "Crossgradient" is in the direction of equal static head.
- (22) "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).
- (23) "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.
- (24) "Downgradient" is in the direction of maximum decreasing static head.
- (25) "Effective porosity" is the volume fraction of the soil (or rock) that is available to transport water. The effective porosity does not include isolated pore spaces.
- (26) "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.
- (27) "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;
- (28) "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.
- (28a) "Existing" means that an underground tank, piping or motor fuel dispensing system is in place when a new installation or replacement of an underground tank, piping, or motor fuel dispensing system begins.

- (29) "Existing tank" means an UST system used to contain an accumulation of regulated substances or for which installation commenced before December 22, 1988. Installation is considered to have commenced if:
- (a) the owner/operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the UST system; and if,
 - (b)
 - (1) either a continuous on-site physical construction or installation program has begun; or,
 - (2) the owner/operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction at the site or installation of the UST system to be completed within a reasonable time.
- (30) "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.
- (31) "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.
- (32) "Fire resistant tank" is a single or double walled AST with a U.L. 2085 listing (or with an equivalent listing from a nationally recognized independent laboratory) that has been designed and constructed to provide fire resistive protection from exposure to a high intensity liquid pool fire. The construction shall prevent release of liquid, failure of the primary tank, failure of the supporting structure, and impairment of venting for a period of not less than two hours when tested using the fire exposure environment described in U.L. 2085 or an equivalent testing procedure for ASTs. An AST can meet the above requirements by adding a coating, if such exists, which would cause the AST to receive a listing as mentioned above. The owner/operator must provide evidence of such listing and proper application of the coating.
- (33) "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.
- (34) "Fraction of organic carbon " is the fraction by weight of total naturally occurring organic carbon in a soil sample.
- (35) "Free product" refers to a regulated substance that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water.)
- (36) "Fund" means the Petroleum Storage Tank Fund created in C.R.S. § 8-20.5-103.
- (37) "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.

- (38) "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).
- (39) "Gradient" 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).
- (40) "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.
- (41) "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.
- (42) "Hydraulic conductivity" is the coefficient of proportionality describing the rate at which water can move through a permeable medium.
- (43) "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.
- (43a) "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.
- (44) "Industrial property" is property currently zoned industrial by the local zoning authority.
- (45) "Infiltration rate " is the volume of water traveling through the unsaturated zone and reaching groundwater per unit time.
- (45a) "Installation Of A New Motor Fuel Dispenser System" means the installation of a new motor fuel dispenser and the equipment necessary to connect the dispenser to the UST system. It does not mean the installation of a motor fuel dispenser installed separately from the equipment needed to connect the dispenser to the UST system. For purposes of these rules, the equipment necessary to connect the motor fuel dispenser to the UST 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.
- (46) "Lens", as referred to in the Tier 2 model, is a horizontal unit of soil which can be assigned different soil properties (e.g. hydraulic conductivity and moisture content), and which is located between a petroleum vapor source and the ground surface or a building. The lens is typically used to estimate volatile chemical diffusion rates when there are units with variable moisture content above a vapor source.
- (47) "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.

- (48) "Marine Service Station" 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.
- (49) "Media" are intervening substances through which something is transmitted or carried (e.g. soil, water, or air).
- (50) "Mortgagee" refers to a mortgagee or the holder of an evidence of debt secured by a mortgage or deed of trust.
- (51) "Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.
- (52) "New UST" means an UST system that will be used to contain an accumulation of regulated substances and for which installation commenced on or after December 22, 1988 (see also "Existing Tank.")
- (53) "Noncommercial purposes" with respect to motor fuel at farms and residences means not for resale.
- (54) "Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed.
- (55) "Out of Service" means that the tank is not being operated in accordance with its intended purpose.
- (56) "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.
- (57) "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. This definition applies to all persons who meet the statutory definition of "owner" or "operator" other than orphaned or abandoned tank owners.
- (58) "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.
- (59) "Petroleum AST system" means an AST system that contains petroleum or a mixture of petroleum with de minimis quantities of other substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, and used oils.
- (60) "Petroleum UST system" means an UST system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
- (61) "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.

- (62) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.
- (63) "Point of compliance" (POC) is a point or location some specified distance hydraulically downgradient of the activity being monitored for compliance.
- (64) "Point of exposure " (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, ethylbenzene 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.
- (65) "Process or Processing" is an integrated sequence of operations. The sequence may be inclusive of both physical and chemical operations and may involve, but is not limited to, preparation, separation, purification, or change in state, energy content, or composition.
- (65a) "Product Deliverer" 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.
- (65b) "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.
- (66) "Reimbursement" means an assignment of money from the Fund to reimburse a person for approved costs incurred in remediating petroleum contamination.
- (67) "Regulated substance" for UST systems has the same meaning as in C.R.S. § 8-20.5-101(13). "Regulated substance" for AST systems means regulated petroleum products.
- (68) "Release detection" means determining whether a release of a regulated substance has occurred from the UST or AST system into the environment or into the interstitial space between the UST or AST system and its secondary barrier or secondary containment around it.
- (69) "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.
- (70) "Repair" means to restore a tank or system component that has caused a release of product from the UST or AST system.

(70a) "Replace" This term applies to underground storage tanks and piping.

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

For piping – Replace means to remove and put back in any amount of piping connected to an UST system. The secondary containment requirements for replaced piping will be 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.

- (71) "Residential property" is property currently zoned residential by the local zoning authority.
- (72) "Residential tank" is a tank located on property used primarily for dwelling purposes.
- (73) "Residual water content" is the fraction of water remaining in soil after gravity drainage.
- (74) "Risk-based screening level(s)"(RBSLs) are the risk-based corrective action target levels for chemical(s) of concern.
- (75) "Saturated zone" is the subsurface zone which occurs below the water table. The soil pores are filled with water, and the moisture content equals the porosity.
- (76) "Secondary Containment" 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.

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). Interstitial monitoring must meet the release detection requirements in 7 C.C.R. 1101-14 §2-4-4 (g).

- (77) "Secondary Containment Tank" 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.
- (78) "Sensitive Environment" 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.
- (79) "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.
- (80) "Service Station" 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.

(80a) "Significant Violation" 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:

(1) 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.

(2) 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.

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

- (81) "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.
- (82) "Site-specific target level(s)" (SSTLs) are the risked-based remedial action target levels for chemical(s) of concern developed for a particular site under the Tier 2 evaluation.
- (83) "Soil bulk density" is the dry weight of soil per unit volume.
- (84) "Source concentration" is the highest concentration, in soil and/or groundwater and /or vapor, of the chemicals of concern.
- (85) "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.
- (86) "Subsurface soils" are all soils located at a depth of greater than one meter below the ground surface.
- (87) "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.
- (88) "Surficial soils" are all soils located from the ground surface to a depth of one meter below ground surface.
- (89) "Temporary closure" means the time between when a tank is out of service and is permanently closed.
- (90) "Tier 1 evaluation" is a risked-based analysis which includes a comparison of the highest levels of contamination remaining on the site with the Tier 1 RBSLs. Each completed exposure pathway must be evaluated. The completed exposure pathway with the lowest RBSLs for a given media will determine the cleanup goals for the site.
- (91) "Tier 1A evaluation" is a risked-based analysis to develop site-specific risk-based screening levels (SS-RBSLs) for complete exposure pathways utilizing the Tier 1 models and incorporating data collected from the site. The completed exposure pathway with the lowest SS-RBSLs will determine the cleanup goals for a given media at the site.

- (92) "Tier 2 evaluation" is a risk-based analysis to develop site-specific target levels (SSTLs) for complete exposure pathways utilizing saturated and unsaturated zone models such as API DSS VADSAT or BP RISC. Acceptable models for the unsaturated zone will be analytical, transient, capable of modeling one dimensional dispersion and degradation, and calculating effective solubility for individual constituents in a mixture. Acceptable models for the saturated zone will be analytical or semi analytical, transient, and simulate retardation, degradation, one dimensional flow and three dimensional dispersion. The Tier 2 evaluation incorporates data collected from the site. The completed exposure pathway with the lowest SSTLs for a given media will determine the cleanup goals for the site.
- (93) "Total porosity" is the volume of pore spaces divided by the total volume of soil.
- (94) "Unattended Cardlock System" is a vehicle fueling facility, which uses a mechanical or electronic method of tracking fuel deliveries using an identification card.
- (95) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.
- (95a) "Under-Dispenser Containment" (UDC) means containment underneath a dispenser that will prevent leaks from the dispenser from reaching soil or groundwater. Such containment must:
- Be liquid-tight on its sides, bottom, and at any penetrations;
 - Be compatible with the substance conveyed by the piping; and
 - Allow for visual inspection and access to the components in the containment system and/or be monitored.
- (96) "Unsaturated zone" is a subsurface zone, which occurs above the water table. The soil pores are only partially filled with water, and the moisture content is less than the porosity.
- (97) "Upgrade" means the addition or retrofit of some systems (such as cathodic protection, lining, modification of the system piping, or spill and overflow controls, etc.) to improve the ability of an UST or AST system to prevent the release of product.
- (98) "UST" means an underground storage tank which is not permanently closed.
- (99) "UST system" means an UST, connected underground piping, underground ancillary equipment, and containment system, if any.
- (100) "Van Genuchten's N" is a parameter, used in the Tier 2 models, to estimate long-term average moisture content in the unsaturated zone.
- (101) "Vault" means an enclosure (other than a secondary containment tank), either above or below-grade, that completely encloses an AST.
- (102) "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

1-6 Codes, Documents or Standards incorporated by reference

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

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

American National Standards Institute Standard B31.3, Petroleum Refinery Piping., published February 14, 2002.

American National Standards Institute Standard B31.4, Liquid Petroleum Transportation Piping System, published August 5, 2002.

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

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

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

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

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

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

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

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

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

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

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

American Society of Testing and Materials Standard D5, Test for Penetration for Bituminous Materials, published June 1, 2005.

American Society of Testing and Materials Standard D4021-86, Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks, published June 15, 1992.

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

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

National Association of Corrosion Engineers 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 Publication NFPA 30, Flammable and Combustible Liquids Code, ~~published July 18, 2003~~ 2008 Edition.

~~National Fire Protection Association Publication NFPA 30A, Code For motor fuel dispensing Facilities and Repair Garages, 2008 Edition.~~

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

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

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

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

National Fire Protection Association Publication NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids, published 1990.

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

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

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

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

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

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

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

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

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

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

Underwriter's Laboratories of Canada CAN4-S615-M83, Standard for Reinforced Plastic Underground Tanks for Petroleum Products, published 1998.

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

Underwriters Laboratories of Canada CAN4-S633-M81, Flexible Underground Hose Connectors, published August 1999.

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

1-7 Inspection of incorporated codes

Interested parties may inspect the referenced incorporated materials by contacting the Program Manager, Oil Inspection Section, 633 17th Street, Suite 500, Denver, CO 80202 and/or The State Depository Libraries.

1-8 Later amendments not included

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

ARTICLE 2 UNDERGROUND STORAGE TANKS

Section 2-1 UST Program Scope and Interim Prohibition

2-1-1 Applicability.

- (a) 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 section 2-1-2.
- (b) The following UST systems are excluded from these 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; and
 - (6) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.
- (c) Deferrals. The following types of UST systems are deferred from all parts of these regulations except section 2-1-2 and Article 5:
- (1) Wastewater treatment tank systems;
 - (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 by the Nuclear Regulatory Commission under 10 C.F.R. Part 50, Appendix A;
 - (4) Airport hydrant fuel distribution systems; and
 - (5) UST systems with field-constructed tanks.
- (d) Deferrals. Section [3-5-2-4](#) (the release detection requirements) does not apply to any UST system that stores fuel solely for use by emergency power generators.
- (e) Requirements For Secondary Containment. Secondary containment requirements apply to new or replaced underground tanks and piping regulated under Colorado Revised Statutes §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 Interim Prohibition for deferred UST systems.

- (a) No person may install an UST system listed in section 2-1-1(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):
 - (1) Will prevent releases due to corrosion or structural failure for the operational life of the UST system;
 - (2) Is cathodically protected against corrosion, constructed of non-corrodible material, steel clad with a non-corrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and
 - (3) Is constructed or lined with material that is compatible with the stored substance.
- (b) Notwithstanding paragraph (a) 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/operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the system.

[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 (b) of this section.]

2-1-3 Determination of Ownership and Use.

An UST which 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 permanently closed in accordance with these regulations. An UST in use on or after December 22, 1988 is considered to be in use until permanently closed in accordance with these regulations.

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

2-2-1 Application for UST Permit.

An application must be submitted to the Director for approval 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.

2-2-2 Construction Requirements.

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

- (a) An application, as described in section 2-2-3 has been approved 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 section 2-2-5 has been paid.

2-2-3 Application Requirements.

The application required by section 2-2-1 must include:

- (a) 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 property lines, the location and names of streets adjacent to the facility; and
- (b) A written application containing information about the proposed construction as follows:
 - 1. Method to be used to prevent releases of regulated substances due to corrosion of the UST system; including piping and any swing joints or flexible connectors that will routinely contain regulated substances;
 - 2. Method to be used to prevent overfilling the UST;
 - 3. Method to be used to prevent spills during transfer operations;
 - 4. Leak detection method that will be used;
 - 5. Type of pump that will be used for dispensing the UST contents;
 - 6. Type of in-line leak detector to be used, if pressurized piping system is to be used;
 - 7. Size and type of existing tanks and pipelines that will continue in use at the facility;
 - 8. Size and type of tanks and pipelines to be installed;
 - 9. Depth of burial of the tanks;
 - 10. Type of backfill material to be used;
 - 11. Surface coverage of the tanks in traffic areas;
 - 12. Method to be used to prevent flotation of the tank;
 - 13. Regulated substances to be stored at the facility;
 - 14. Name and address of the facility;
 - 15. Name and address of the operator of the facility;
 - 16. Name and address of the owner of the UST system; and
 - 17. Type of Vapor Recovery System to be used at the facility.

The name and address of the installer, the name of the tank manufacturer, and the tank serial numbers should be included if known at the time of application submission; otherwise they must be supplied when the installation is inspected.

The Director will make available an application form to facilitate submission of the required information.

2-2-4 Inspection of the Facility during Construction.

The Director will make an inspection of the UST system before completion of construction activities to verify that the construction is proceeding according to plan. 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.

2-2-5 Plan Review and Installation Inspection Fee.

Each 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, for each UST installation or upgrade construction plan submitted.

2-2-6 Denial, Revocation, or Modification of Permit.

- (a) 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.
- (b) An UST permit may be denied if the permit application is not complete or is determined to be inaccurate.
- (c) An UST 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. An UST permit is automatically revoked six months after the date of issue unless the Director grants an extension in writing.
- (d) Six months or later after an UST permit is issued, the permit may be modified by subsequent statutory or regulatory changes.

2-2-7 Access to premises and records of UST facilities.

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.

2-2-8 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 will be required for all new underground tanks installations. 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 underground 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 may be used to comply with paragraph (a)(1) of this section: Underwriters Laboratories Standard 1316, "Standard for Glass- Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products"; Underwriter's Laboratories of Canada CAN4-S615-M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products"; or American Society of Testing and Materials Standard D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."]

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

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

- (A) Steel Tank Institute "Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";
- (B) Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";
- (C) Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," and CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids," and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or
- (D) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."]

- (3) The tank is constructed of a steel-fiberglass-reinforced-plastic composite; or

[Note: The following industry codes may be used to comply with paragraph (a)(3) of this section: Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks," or the Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad Underground Storage Tanks."]

- (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

- (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 will be required for all new piping installations, including piping to remote fills. For replaced piping, secondary containment and interstitial monitoring will be 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 (UDC, 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. Solely for 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; or

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

- (A) Underwriters Laboratories Subject 971, "UL Listed Non-Metal Pipe";
- (B) Underwriters Laboratories Standard 567, "Pipe Connectors for Flammable and Combustible 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 section 2-3-2(c); and
- (iv) Cathodic protection systems are operated and maintained in accordance with section 2-3-2; 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 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and
 - (D) National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems."]
- (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 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 overflow prevention equipment.

- (1) Except as provided in paragraph (c)(2) of this section, to prevent spilling and overflowing associated with product transfer to the UST system, owners/operators must use the following spill and overflow 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 (for example, a spill catchment basin); and
 - (ii) Overflow 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 overflow 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.

(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), or
- (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 unburied flexible connectors or risers or other transitional components that are beneath the dispenser and connect the dispenser to the piping.
- (iii) An existing dispenser is removed and replaced with another dispenser and the dispenser island has to be modified (break concrete) to install the dispenser.

(2) 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:

- (i) 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 days of a year thereafter using a testing method listed by the National Workgroup on Leak Detection Evaluations (NWGLDE) or using alternate test methods approved by the Director.
- (ii) 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 using alternate test methods approved by the Director.
- (iii) Be checked for evidence of a release at least every 30 days.
- (iv) Interstitial monitoring must meet the requirements of 7 C.C.R. 1101-14 §2-4-4 (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.

(d) Installation. All tanks and piping 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 (d) of this section:

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

- (ii) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or
- (iii) American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System."]

Effective January 1, 2009 all tanks and piping must be properly installed by an OPS certified installer. To obtain OPS certification, 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 installer certification documentation from other states that have equivalent certification requirements.

(e) Certification of installation. All owners/operators must ~~ensure that one or more of the following methods of certification, testing, or inspection is used to~~ demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST registration form in accordance with section 2-2-10.

~~(1) The installer has been certified by the tank and piping manufacturer(s) to install the particular tank installed; or~~

~~(2) The installer is currently licensed by the Director; or~~

~~(3) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or~~

~~(4) The installation has been inspected and approved by the Director and certified by the owner/operator; or~~

~~(5) All work listed in the manufacturer's installation checklists has been completed and documented; or~~

~~(6) The owner/operator has complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the Director to be no less protective of human health and the environment than the above methods.~~

~~In any event, the responsibility for ensuring compliance with the installation regulations belongs to the owner/operator.~~

(f) Pursuant to C.R.S. § 8-20.5-204, the owner/operator is required to notify the Director and receive approval by the Director of the installation.

2-2-9 Upgrading of existing UST systems.

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

(1) New UST system performance standards under section 2-2-8; or

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

(3) Closure requirements under section 2-5 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 section 2-3-4, 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.

(2) Cathodic protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of section 2-2-8(a)(2)(ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

- (i) The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or
- (ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with section 2-4-4(d) through (h); or
- (iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of section 2-4-4(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or
- (iv) The tank is 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 paragraphs (b)(2)(i) through (iii) of this section.

(3) Internal lining combined with cathodic protection. A tank may be upgraded by both internal lining and cathodic protection if:

- (i) The lining is installed in accordance with the requirements of section 2-3-4; and
- (ii) The cathodic protection system meets the requirements of section 2-2-8(a)(2)(ii), (iii), and (iv).

[Note: The following codes and standards may be used to comply 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 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 section 2-2-8(b)(2)(ii), (iii), and (iv).

[Note: The codes and standards listed in the note following section 2-2-8(b)(2) may be used to comply with this requirement.]

- (d) Spill and overflow prevention equipment. To prevent spilling and overflowing associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overflow prevention equipment requirements specified in section 2-2-8(c).

2-2-10 Registration of UST Systems.

- (a) Each owner/operator of an UST system must register each system with the Director within 30 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 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 out of service.

[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 section 103(c) of CERCLA. Owners/operators who have not complied with the notification requirements may use the registration form described in section 2-2-10(h)]

- (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 change of owner or operator, or completed closure of an UST system, the owner/operator is required to submit an updated the registration form within 60 30 days.
- (e) Registration forms required to be submitted under paragraph (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 section 2-2-8(e);
 - (2) Cathodic protection of steel tanks and piping under section 2-2-8(a) and (b);
 - (3) Financial responsibility under Article 6 of these regulations; and

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

- (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 section 2-2-8(d).
- (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 paragraph (a) of this section.
- (i) The registration form supplied by the Director will meet the requirements of section 9002 of the federal Solid Waste Disposal Act as amended.
- (j) The required fee for UST registration is the amount required 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.

(k) Upon satisfaction of the registration requirements, the Director will issue an annual certificate of registration for each registered facility which shall be posted or maintained onsite, such that it is readily available for inspection by OPS inspectors or delivery personnel.

Section 2-3 General Operating Requirements

2-3-1 Spill and overflow control.

- (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.

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

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

2-3-2 Operation and maintenance of 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:

- (a) 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.
- (b) 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 (b)(2) of this section.]

- (c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure that the equipment is running properly.
- (d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with section 2-3-5) to demonstrate compliance with the performance standards in this section. These records must provide the following:
 - (1) The results of the last three inspections required in paragraph (c) of this section; and
 - (2) The results of testing from the last two inspections required in paragraph (b) of this section.

2-3-3 Compatibility.

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

[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/Cosolvent Blends at Distribution Terminals and Service Stations."]

2-3-4 Repairs allowed.

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: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."]

- (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 pipes and fittings may be repaired in accordance with the manufacturer's specifications.
- (d) Repaired tanks and piping must be tightness tested in accordance with sections 2-4-4(c) and 2-4-5(b) within 30 days following the date of the completion of the repair unless:
 - (1) 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
 - (2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in section 2-4-4(d) through (h); or
 - (3) 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.
- (e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with section 2-3-2(b) and (c) to ensure that it is operating properly.
- (f) UST system owners/operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this section.

2-3-5 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 for document submission, testing, and monitoring by the owner/operator pursuant to section 9005 of Subtitle I of the Resource Conservation and Recovery Act, as amended.

- (a) Reporting. Owners/operators must submit the following information to the Director:
 - (1) Registration for all UST systems (§ 2-2-10), which includes certification of installation for new UST systems (§ 2-2-8(e));
 - (2) Reports of all releases including suspected releases (§ 4-1), spills and overfills (§ 4-4), and confirmed releases (§ 5-2);
 - (3) Corrective actions planned or taken including initial abatement measures and initial site characterization (§ 5-2), and corrective action plans (§ 5-3); and
 - (4) A notification before temporary closure, permanent closure or change-in-service (§ 2-5-2).
 - (5) A notification before installation of a new dispenser.
- (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 (§ 2-2-8(a)(4) and (b)(3)).
 - (2) Documentation of operation of corrosion protection equipment (§ 2-3-2);
 - (3) Documentation of UST system repairs (§ 2-3-4(f));
 - (4) Recent compliance with release detection requirements (§ 2-4-6); and

- (5) Results of the site investigation conducted at permanent closure (§ 2-5-5).
- (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 section 2-5-5, 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.
- (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 Release Detection

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

- (a) Owners/operators of new and existing UST systems 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; and
 - (3) Meets the performance requirements in sections 2-4-4 and 2-4-5, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, 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 sections 2-4-4(b), (c), and (d) or 2-4-5(a) and (b), 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 sections 2-4-4 and 2-4-5 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 this section 2-4 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			

Schedule for Phase-in of Release Detection					
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 sections 2-4-2(b)(1) and 2-4-3(b)(4).

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

(d) 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 section 2-5 immediately.

2-4-2 Requirements for petroleum UST systems.

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

- (a) Tanks. Tanks must be monitored at least every 30 days for releases using one of the methods listed in section 2-4-4(d)-(h) except that:
- (1) UST systems that meet the performance standards in sections 2-2-8 or 2-2-9, and the monthly inventory control requirements in section 2-4-4(a) or (b), may use tank tightness testing (conducted in accordance with section 2-4-4(c)) at least once every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under section 2-2-9(b), whichever is later;
 - (2) UST systems that do not meet the performance standards in sections 2-2-8 or 2-2-9 may use monthly inventory controls (conducted in accordance with section 2-4-4(a) or (b)) and annual tank tightness testing (conducted in accordance with section 2-4-4(c)) until December 22, 1998 when the tank must be upgraded under section 2-2-9 or permanently closed under section 2-5-2; and
 - (3) Tanks with a capacity of 1,000 gallons or less may use weekly tank gauging (conducted in accordance with § 2-4-4(b)).
- (b) Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:
- (1) Pressurized piping. Underground piping that conveys regulated substances under pressure must:
 - (i) Be equipped with an automatic line leak detector which meets the requirements of section 2-4-5(a); and

- (ii) Have an annual line tightness test conducted in accordance with section 2-4-5(b) or have monthly monitoring conducted in accordance with section 2-4-5(c).
- (2) 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 section 2-4-5(b), or use a monthly monitoring method conducted in accordance with section 2-4-5(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:
- (i) The below-grade piping operates at less than atmospheric pressure;
 - (ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;
 - (iii) Only one check valve is included in each suction line;
 - (iv) The check valve is located directly below and as close as practical to the suction pump; and
 - (v) A method is provided that allows compliance with paragraphs (b)(2)(ii)-(iv) of this section to be readily determined.

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

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

- (a) Release detection at existing UST systems must meet the requirements for petroleum UST systems in section 2-4-2. 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) Secondary containment systems must be designed, constructed and installed to:
 - (i) Contain regulated substances released from the UST system until they are detected and removed;
 - (ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and
 - (iii) Be checked for evidence of a release at least every 30 days.

[Note: The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements.]
 - (2) Double-walled tanks must be designed, constructed, and installed to:
 - (i) Contain a release from any portion of the inner tank within the outer wall; and
 - (ii) Detect the failure of the inner wall.
 - (3) External liners (including vaults) must be designed, constructed, and installed to:
 - (i) Contain 100 percent of the capacity of the largest tank within its boundary;

- (ii) Prevent the interference of precipitation or groundwater intrusion with the ability to contain or detect a release of regulated substances; and
 - (iii) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).
- (4) 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 regulated substances under pressure must be equipped with an automatic line leak detector in accordance with section 2-4-5(a).
- (5) Other methods of release detection may be used if owners/operators:
 - (i) 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 section 2-4-4(b)-(h) can detect a release of petroleum;
 - (ii) 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) Obtain written approval from the Director to use the alternate release detection method before the installation and operation of the new UST system.

2-4-4 Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of section 2-4-2 must be conducted in accordance with the following:

- (a) Inventory control. 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:
 - (1) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;
 - (2) 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;
 - (3) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;
 - (4) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;
 - (5) Product dispensing is metered and recorded within an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and
 - (6) 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 for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this paragraph.]

(b) Manual tank gauging. Manual tank gauging must meet the following requirements:

- (1) Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;
- (2) Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;
- (3) 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;
- (4) A leak 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:

Tank Capacity (Gallons)	Tank Dimensions	Weekly Standard 1 Test (Gallons)	Monthly Standard Average of 4 Tests (Gallons)	Minimum Rest Period Duration
550	N/A	10	5	36 hours
551-1,000	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	N/A	26	13	36 hours

(5) Only tanks of 1,000 gallons or less nominal capacity may use manual tank gauging as the sole method of release detection. Tanks of 1,001 to 2,000 gallons may use this method in place of inventory control in section 2-4-4(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this section.

(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) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of section 2-4-4(a).

- (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 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)-(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 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 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 UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;
 - (i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (not more than 0.000001 cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;
 - (ii) The barrier is compatible with the regulated substance stored so that a release from the UST system 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 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.
 - (3) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.
- (h) 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.

2-4-5 Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of section 2-4-2 must be conducted in accordance with the following:

- (a) Automatic line leak detectors. Methods 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.
- (b) Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.
- (c) Applicable tank methods. Any of the methods in section 2-4-4(e)-(h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

2-4-6 Release detection record keeping.

All UST system owners/operators must maintain records in accordance with section 2-3-5 demonstrating compliance with all applicable requirements of this section. These records must include the following:

- (a) 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;
- (b) 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 that the results of tank tightness testing conducted in accordance with section 2-4-4(c) must be retained until the next test is conducted; and
- (c) 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.
- (d) 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 2-5 Out of Service UST Systems and Closure

2-5-1 Temporary closure.

- (a) Owner/Operators shall notify the Director in writing at least 10 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 section 2-5-3, and submit these results with the temporary closure notification.

- (b) When an UST system is temporarily closed, owners/operators must continue operation and maintenance of corrosion protection in accordance with section 2-3-2, and any release detection in accordance with section 2-4. Articles 4 and 5 must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.
- (bc) When an UST system is temporarily closed for 3 months or more, owners/operators must also comply with the following requirements:
- (1) Leave vent lines open and functioning; and
 - (2) Cap and secure all other lines, pumps, manways, and ancillary equipment.
- (ed) When an UST system is temporarily closed for more than 12 months, owners/operators must permanently close the UST system ~~if it does not meet either performance standards in section 2-2-8 for new UST systems or the upgrading requirements in section 2-2-9, except that the spill and overfill equipment requirements do not have to be met. Owners/operators must permanently close the substandard UST systems at the end of this 12-month period~~ in accordance with sections 2-5-2 to 2-5-5, unless the Director provides a written extension of the 12-month temporary closure period. Owners/operators must complete a site assessment in accordance with section 2-5-3 before such an extension can be applied for.
- (e) Owner/operators shall notify the Director in writing no more than 30 days prior to placing a UST back in service, and at that same time submit documentation of passing tightness tests (ullage) for the tanks and lines conducted within the past 30 days.

2-5-2 Permanent closure and changes-in-service.

- (a) At least 10 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of 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. The required assessment of the excavation zone under section 2-5-3 must be performed after notifying the Director, but before completion of the permanent closure or a change-in-service.
- (b) To permanently close a tank, owner/operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material.
- (c) 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 section 2-5-3.

[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.]

2-5-3 Assessing the site at closure or change-in-service.

- (a) Before 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, as specified in Article 5. The requirements of this section are satisfied if one of the external release detection methods allowed in section 2-4-4(e) or (f) is operating in accordance with the requirements in section 2-4-4 at the time of closure, and indicates no release has occurred.
- (b) If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners/operators must begin corrective action in accordance with Article 5.

2-5-4 Applicability to previously closed UST systems.

When directed by the Director, the owner/operator of an UST system permanently closed before December 22, 1988 must assess the excavation zone and close the UST system in accordance with this section if releases from the UST may, in the judgment of the Director, pose a current or potential threat to human health and the environment.

2-5-5 Closure records.

Owners/operators must maintain records in accordance with section 2-3-5 that are capable of demonstrating compliance with closure requirements under this section. The results of the excavation zone assessment required in section 2-5-3 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

- (a) By the owners/operators who took the UST system out of service;
- (b) By the current owners/operators of the UST system site; or
- (c) By mailing these records to the Director if they cannot be maintained at the closed facility.

[Note, all applicants to the Fund may be required to maintain closure records until reimbursement is complete.]

Section 2-6 Delivery Prohibition

Delivery prohibition is 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 §8-20.5-101 C.R.S., except for those tanks identified in 7 C.C.R. 1101-14 §2-1-1 (b) and (c) 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, not 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 an UST identified by OPS as ineligible to receive product.

2-6-1 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:

- (i) Required spill prevention equipment is not installed, or functional;
- (ii) Required overfill protection equipment is not installed, or functional;
- (iii) Required leak detection equipment is not installed, or functional;
- (iv) Required corrosion protection equipment is not installed, or functional; or
- (v) 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.
- (vi) Failure to register or maintain current registration on an UST.

(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 § 8-20.5-107 C.R.S.) under any of the following circumstances and the owner/operator has failed to take corrective action within the requested time frame:

- (i) Inability to demonstrate proper operation and/or maintenance of leak detection equipment;
- (ii) Inability to demonstrate proper operation and/or maintenance of spill, overfill, or corrosion protection equipment;
- (iii) 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.

2-6-2 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.

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. The red tag will have the following content:

- (a) A red tag shall be red in color and 3 inches wide by 5 inches long and made of plastic or other durable and damage resistant material.
- (b) Red tags shall bear the following information on both sides of the tag:
 - (i) 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!"

(ii) The following wording, printed in white below the wording described in subsection (b)(i) 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."

(iii) Printed below the wording described in subsection (b)(i), the following wording in at least 16 point type: "If you have questions call OPS (303)318-8547"

(iv) 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 write legibly in permanent ink at the time of placement, 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 so that the information contained on the tag is not legible.

2-6-3 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 Field Violation Form 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).

2-6-4 Reclassifying Ineligible UST 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 section 2-6-6 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 § 8-20.5-107 C.R.S. shall apply.

(b) By close of business (5pm) 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 business 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 business days, or sooner if requested by the field inspector.

2-6-5 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 days after determining an UST is ineligible for delivery, deposit, or acceptance of product.

2-6-6 Delivery Prohibition Deferral in Emergency Situations

In emergency situations, OPS 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 days after determining an UST is ineligible for delivery, deposit, or acceptance of product.

2-6-7 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.

Section 2-7 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 regulation in 7 C.C.R. 1101-14 §2-1-1(b) and those deferred by regulation in 7 C.C.R. 1101-14 §2-1-1(c).

2-7-1 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 will be 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, OPS 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.

2-7-2 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 OPS 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 C Operator training requirements.

2-7-3 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.

2-7-4 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. Not all employees of the facility are necessarily Class C operators.

(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.

2-7-5 Acceptable Training and Certification Processes

Operator training must evaluate operator knowledge of the minimum training requirements described for each class of operator in Section 2-7-2 through 2-7-4 of these regulations. 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 OPS approval. 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, OPS may accept operator training certification verification from other states that have equivalent operator training requirements.

2-7-6 Training and Certification Deadlines and Schedules

(a) By January 1, 2010, owners of UST systems shall submit a signed statement to OPS 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 OPS of any change of designated Class A or B operator(s) no later than 30 days after the change. Documentation identifying the designated Class C operators shall be maintained on site.

(b) Effective January 1, 2010, designated Class A and B operators shall be trained and possess 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.

(c) 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.

(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 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.

2-7-7 Retraining Requirements

If OPS determines an UST system is out of compliance, the Class A and/or Class B operator must be retrained and recertified within 90 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 2-6-1, or

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

2-7-8 Monthly Visual 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
- (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).
- (3) Inspecting 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. The records shall be maintained on-site for all attended facilities or, if approved by OPS, off-site at a readily available location.

2-7-9 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) Compiling and reviewing monthly release detection, visual inspection and corrosion protection records from the prior twelve months.
- (2) Compiling and reviewing 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) Conducting functionality testing on all line leak detectors, sump sensors and overflow prevention equipment in accordance with manufacturers specifications to ensure proper installation and operation.
- (4) Checking that all required testing and maintenance for the UST system have been completed, and documenting the dates these activities occurred.
- (5) Verifying that all designated Class C operators have been trained in accordance with Sections 2-7-4 and 2-7-5 of these regulations.
- (6) Completing 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.

(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 30 days of an OPS request for records.

