

**Proposed Amendments
to the
California Code of Regulations
Title 23. Waters
Division 3. State Water Resources Control Board
and Regional Water Quality Control Boards
Chapter 16. Underground Storage Tank
Regulations**

PROPOSED AMENDMENTS

**November 2017
State Water Resources Control Board
Division of Water Quality**

The proposed changes: insertions shown as underline and deletions shown as ~~strikethrough~~.

D R A F T

TITLE 23. WATERS DIVISION 3. STATE WATER RESOURCES CONTROL BOARD AND REGIONAL WATER QUALITY CONTROL BOARDS CHAPTER 16. UNDERGROUND TANK REGULATIONS

Article 1. Definition of Terms

§ 2611. Additional Definitions.

Unless the context requires otherwise, the following definitions shall apply to terms used in this chapter.

“Bladder system” means a flexible or rigid material which provides primary containment including an interstitial monitoring system designed to be installed inside an existing underground storage tank.

“Best management practice” means any underground storage tank system management and operation practice that is the most effective and practicable method of preventing or reducing the probability of a release.

“Cathodic protection tester” means any individual who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metallic piping and underground storage tank systems. Such an individual shall possess a current certificate from the National Association of Corrosion Engineers or the International Code Council, demonstrating education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried or submerged metallic piping and underground storage tank systems.

“Coatings expert” means a person who, by reason of thorough training, knowledge and experience in the coating of metal surfaces, is qualified to engage in the practice of internal tank lining inspections. The term includes only those persons who are independent of any lining manufacturer or applicator and have no financial interest in the tank or tanks being monitored.

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

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

“Continuous monitoring” means a system using equipment which routinely performs the required monitoring on a periodic or cyclic basis throughout each day.

“Corrosion specialist” means any individual 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 metallic piping and underground storage tank systems. Such an individual shall possess a current certificate from the National Association of Corrosion Engineers as a corrosion specialist, or be a registered professional engineer with a current certificate or license requiring education and experience in corrosion control of buried or submerged metallic piping and underground storage tank systems.

“Decommissioned tank” means an underground storage tank which cannot be used for one or more of the following reasons: 1) the tank has been filled with an inert solid; 2) the fill pipes have been sealed; or, 3) the piping has been removed.

“Designated underground storage tank operator” or “designated UST operator” means one or more individuals designated by the owner or operator to have responsibility for training facility employees and conducting monthly-visual inspections at an underground storage tank facility. A “designated UST operator” is not considered the “operator” as defined in Chapter 6.7 of Division 20 of the Health and Safety Code, although the same individual may hold both positions.

“Dispenser” means an aboveground or underground device that is used for the delivery of a hazardous substance from an underground storage tank. Dispenser includes metering and delivery devices, and fabricated assemblies located therein.

“Emergency containment” means a containment system for accidental spills which are infrequent and unpredictable.

“Excavation zone” means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the underground storage tank system is placed at the time of installation.

“Existing underground storage tank” means an underground storage tank installed prior to January 1, 1984. The term also includes an underground storage tank installed before January 1, 1987 and which is located on a farm, has a capacity greater than 1,100 gallons, and stores motor vehicle fuel used primarily for agricultural purposes and not for resale.

“Facility employee” means an individual who is employed on-site at an underground storage tank facility, and who may be called upon to respond to spills, overfills, or other problems associated with the operation of the underground storage tank system. A “facility employee” is not considered the “operator” as defined in Chapter 6.7 of Division 20 of the Health and Safety Code, although the same individual may hold both positions.

“Fail safe” means that a monitoring system will shut down the turbine pump in the event of a power outage, or when the monitoring system fails or is disconnected.

“Farm tank” means any one tank or a combination of manifolded tanks that: 1) are located on a farm; and, 2) holds no more than 1,100 gallons of motor vehicle fuel which is used primarily for agricultural purposes and is not held for resale.

“First ground water” means the uppermost saturated horizon encountered in a bore hole.

“Free product” refers to a hazardous substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water).

“GeoTracker” has the same meaning as “Geotracker” as defined in section 3891 of title 23 of the California Code of Regulations.

“Ground water” means subsurface water which will flow into a well.

“Hazardous substance” means a substance which meets the criteria of either ~~paragraph (1) or paragraph (2) of subdivision (h) of~~ section 25281 (h)(1) or (2) of the Health and Safety Code.

“Heating oil tank” means a tank located on a farm or at a personal residence and which holds no more than 1,100 gallons of home heating oil which is used consumptively at the premises where the tank is located.

“Holiday,” when used with respect to underground storage tank coating or cladding, means a pinhole or void in a protective coating or cladding.

“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.

“Inconclusive” means the conclusion of a statistical inventory reconciliation report that is not decisive as to whether a release has been detected.

“Independent testing organization” means an organization which tests products or systems for compliance with voluntary consensus standards. To be acceptable as an independent testing organization, the organization shall not be owned or controlled by any client, industrial organization, or any other person or institution with a financial interest in the product or system being tested. For an organization to certify, list, or label products or systems in compliance with voluntary consensus standards, it shall maintain formal periodic inspections of production of products or systems to ensure that a listed, certified, or labeled product or system continues to meet the appropriate standards.

“Independent third party” means independent testing organizations, consulting firms, test laboratories, not-for-profit research organizations and educational institutions with no financial interest in the matters under consideration. The term includes only those organizations which are not owned or controlled by any client, industrial organization, or any other institution with a financial interest in the matter under consideration.

“Integral secondary containment” means a secondary containment system manufactured as part of the underground storage tank.

“Interstitial liquid level measurement” method (as the term is used in section 25290.1 of the Health and Safety Code) or “hydrostatic monitoring” method means a release detection method that continuously monitors the liquid level within a liquid-filled interstitial space of an underground storage tank. The term includes only those release detection systems that are capable of detecting a breach in the primary or secondary containment of the underground storage tank component(s) being monitored before the hazardous substance stored is released to the environment. To accomplish this, the liquid in the interstitial space shall be maintained at a pressure greater than the operating pressure found within the component(s) being monitored. This pressure may be achieved, for example, by adequately elevating the liquid reservoir or by pressurizing the liquid-filled interstice. Hydrostatic monitoring methods shall meet the requirements of section 2643, ~~subdivision (f)~~.

“Interstitial space” means the space between the primary and secondary containment systems.

“Leak threshold” means the value against which test measurements are compared and which serves as the basis for declaring the presence of a leak. The leak threshold is set by the manufacturer in order to meet state and federal requirements. Leak threshold is not an allowable leak rate.

“Liquid asphalt tank” means an underground storage tank which contains steam-refined asphalts.

“Liquefied petroleum gas tank” means an underground storage tank which contains normal butane, isobutane, propane, or butylene (including isomers) or mixtures composed predominantly thereof in a liquid or gaseous state having a vapor pressure in excess of 40 pounds per square inch absolute at a temperature of 100 degrees Fahrenheit.

“Maintenance” means the normal operational upkeep to prevent an underground storage tank system from releasing hazardous substances.

“Manufacturer” means any business which produces any item discussed in these regulations.

“Manual inventory reconciliation” means a procedure for determining whether an underground tank system is leaking based on bookkeeping calculations, using measured throughput and a series of daily inventory records taken manually by the tank owner or operator or recorded electronically. This ~~terms-term~~ does not include procedures which are based on statistical inventory reconciliation.

“Membrane liner” means any membrane sheet material used in a secondary containment system. A membrane liner shall be compatible with the substance stored.

“Membrane liner fabricator” means any company which converts a membrane liner into a system for secondary containment.

“Membrane manufacturer” means any company which processes the constituent polymers into membrane sheeting from which the membrane liner is fabricated into a system for secondary containment.

“Month” means a calendar month.

“Motor vehicle” means a self-propelled device by which any person or property may be propelled, moved, or drawn.

“Motor vehicle fuel tank” means an underground storage tank that contains a petroleum product. The definition does not include underground storage tanks that contain used oil.

“New underground storage tank” means an underground storage tank which is not an existing underground storage tank.

“Non-volumetric test” means a tank integrity test method that ascertains the physical integrity of an underground storage tank through review and consideration of circumstances and physical phenomena internal or external to the tank.

“Operational life” means the period beginning when installation of the tank system has begun until the time the tank system should be properly closed.

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

“Person,” as defined in Chapter 6.7 of Division 20 of the Health and Safety Code includes any entity defined as a person under the federal act.

“Perennial ground water” means ground water that is present throughout the year.

“Petroleum” means petroleum including crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute.

“Pipeline leak detector” means a continuous monitoring system for underground piping capable of detecting at any pressure, a leak rate equivalent to a specified leak rate and pressure, with a probability of detection of 95 percent or greater and a probability of false alarm of ~~5~~ five percent or less.

“Probability of detection” means the likelihood, expressed as a percentage, that a test method will correctly identify a leaking underground storage tank.

“Probability of false alarm” means the likelihood, expressed as a percentage, that a test method will incorrectly identify a “tight” tank as a leaking underground storage tank.

“Qualitative release detection method” means a method which detects the presence of a hazardous substance or suitable tracer outside the underground storage tank being tested.

“Quantitative release detection method” means a method which determines the integrity of an underground storage tank by measuring a release rate or by determining if a release exceeds a specific rate.

“Release detection method or system” means a method or system used to determine whether a release of a hazardous substance has occurred from an underground tank system into the environment or into the interstitial space between an underground tank system and its secondary containment.

“Repair” means to restore a tank or underground storage tank system component that has caused a release of a hazardous substance from the underground storage tank system. The term “repair” also includes restoring to proper operating condition a tank, pipe, spill container, overfill prevention equipment, corrosion protection equipment, release detection equipment, or other underground storage tank system component that have ceased to function properly and cause the underground tank system to be out of compliance with this chapter.

“Septic tank” means a tank designed and used to receive and process biological waste and storage.

“Service technician” means any individual who installs or tests monitoring equipment, or provides maintenance, service, system programming or diagnostics, calibration, or troubleshooting for underground storage tank system components.

“Statistical inventory reconciliation” means a procedure to determine whether a tank is leaking based on the statistical analysis of measured throughput and a series of daily inventory records taken manually by the tank owner or operator or recorded electronically.

“Statistical inventory reconciliation provider” means the developer of a statistical inventory reconciliation method that meets federal and state standards as evidenced by a ~~third-party-third party~~ evaluation conducted according to section 2643(f), or an entity that has been trained and certified by the developer of the method to be used. In either case, the provider shall have no direct or indirect financial interest in the underground storage tank being monitored.

“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.

“Submit” means to provide documentation or information to the State Water Board, the Regional Water Quality Board, or the local agency by the specified method. If no method is specified herein, submittal may be made by hand-delivery, mail, or facsimile or other electronic methods, unless otherwise directed by the agency that will receive the submittal. If the method specified is through the California Environmental Reporting System or a local reporting portal, but at the time of the submittal the California Environmental Reporting System data dictionary does not define the data elements for the submittal and there is no specific-named document upload option for that submittal, then it shall be as though no method is specified.

“Substantially beneath the surface of the ground” means that at least 10 percent of the underground tank system volume, including the volume of any connected piping, is below the ground surface or enclosed below earthen materials.

“Sump,” “pit,” “pond,” or “lagoon” means a depression in the ground which lacks independent structural integrity and depends on surrounding earthen material for structural support of fluid containment.

“Tank integrity test” means a test method that can ascertain the physical integrity of any underground storage tank. The term includes only test methods which are able to detect a leak of 0.1 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of ~~5-five~~ percent or less. The test method may be either volumetric or non-volumetric in nature. A leak rate is reported using a volumetric test method, whereas, a non-volumetric test method reports whether a substance or physical phenomenon is detected which may indicate the presence of a leak.

“Unauthorized release” as defined in Chapter 6.7 of Division 20 of the Health and Safety Code does not include intentional withdrawals of hazardous substances for the purpose of legitimate sale, use, or disposal.

“Under-dispenser containment” means secondary containment that is located under a dispenser.

“Under-dispenser spill containment or control system” means a device that is capable of preventing an unauthorized release from under the dispenser from entering the soil or groundwater or both.

“Upgrade” means the addition or retrofit of some systems such as cathodic protection, lining, secondary containment, ~~or spill containers, and or~~ overfill prevention equipment ~~controls~~ to improve the ability of an underground storage tank system to prevent the release of hazardous substances.

“Volumetric test” means a tank integrity test method that ascertains the physical integrity of any underground storage tank through review and comparison of tank volume.

“Voluntary consensus standards” means standards that shall be developed after all persons with a direct and material interest have had a right to express a viewpoint and, if dissatisfied, to appeal at any point (a partial list of the organizations that adopt voluntary consensus standards are shown in Appendix I, Table B).

“Wastewater treatment tank” means a tank designed to treat influent wastewater through physical, chemical, or biological methods and which is located inside a public or private wastewater treatment facility. The term includes untreated wastewater holding tanks, oil water separators, ~~clarifies clarifiers~~, sludge holding tanks, filtration tanks, and clarified water tanks that do not continuously contain hazardous substances.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25282, 25283, 25284, 25284.1, 25290.1, 25292.3, 25296.35, 25299.5(a), 25404 and 25404.1, Health and Safety Code; and 40 CFR §§ 280.10, ~~and~~ 280.12 and 280.36.

Article 2. General Provisions

§ 2620. General Intent, Content, Applicability and Implementation of Regulations.

- (a) The regulations in this chapter are intended to protect waters of the state from discharges of hazardous substances from underground storage tanks. These regulations establish construction requirements for new underground storage tanks; establish separate monitoring requirements for new and existing underground storage tanks; establish uniform requirements for unauthorized release reporting and for repair, upgrade, and closure of underground storage tanks; and specify variance request procedures.
- (b) Owners and operators shall comply with these regulations except as otherwise specifically provided herein. If the operator is not the owner, then the owner shall enter into a written contract with the operator requiring the operator to monitor the underground storage tank; maintain appropriate records; and implement reporting procedures as required by any applicable permit. Both the owner and operator are responsible for assuring that the underground storage tank system is repaired or upgraded in accordance with Article 6, or closed in accordance with Article 7, as appropriate.
- (c) Counties shall implement the regulations in this chapter within both the incorporated and unincorporated areas of the county through the issuance of underground storage tank operating permits to underground storage tank owners. A city may, by ordinance, assume the responsibility for implementing the provisions of this chapter within its boundaries in

accordance with section 25283 of the Health and Safety Code. Local agencies shall issue an operating permit for each underground storage tank, for several underground storage tanks, or for each facility, as appropriate, within their jurisdiction.

- (d) Owners and operators shall comply with the construction and monitoring requirements of Article 3 (new underground storage tanks) or the monitoring requirements of Article 4 (existing underground storage tanks). However, owners of existing underground storage tanks which meet the construction and monitoring requirements of Article 3 may be issued operating permits pursuant to the requirements of Article 3 in lieu of the requirements of Article 4. In addition, owners or operators of underground storage tanks shall comply with the release reporting requirements of Article 5, the repair and upgrade requirements of Article 6, the closure requirements of Article 7, the underground storage tank operating permit requirements of Article 10 and the corrective action requirements of Article 11.

(e) On and after the effective date of this subdivision, the period between all testing and inspections shall not exceed the maximum number of months set forth in these regulations. All testing and inspections shall be completed anytime before or during the month the testing or inspection is required.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25283, 25284, 25299.1 and 25299.3, Health and Safety Code; and 40 CFR 280.

§ 2621. Exemptions to the Regulations.

- (a) The term “underground storage tank” excludes all of the following, except ~~those of the following to the extent they are~~ included in the definition of an underground storage tank in 40 CFR, part 280.12 as modified by paragraphs (b), and (c), ~~(d)~~, of 40 CFR, part 280.10.

(1) A farm tank.

(2) A heating oil tank.

(3) A hydraulic lift tank in accordance with section 25281(y) of the Health and Safety Code.

(4) A liquefied petroleum gas tank.

(5) A liquid asphalt tank.

(6) A septic tank.

(7) A sump, pit, pond, or lagoon.

(8) A wastewater treatment tank ~~except a tank which is that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act (33 U.S.C. Sec. 1251 et seq.)~~ and is not part of an underground storage tank system.

(9) A pipeline located in a refinery or in an oil field unless the pipeline is connected to an underground storage tank.

(10) Storm water or wastewater collection systems.

- (11) Tanks containing radioactive material such as spent fuel pools, radioactive waste storage tanks, and similar tanks under the Atomic Energy Act of 1954 (~~42 USC 2011 U.S.C. Sec. 2011 et seq.~~) and following.
 - (12) An emergency containment tank kept empty to receive accidental spills and approved for such use by the appropriate local agency.
 - (13) Drums located in basements and which contain 55 gallons or less of a hazardous substance.
 - (14) Underground storage tanks containing hazardous wastes as defined in ~~Section section~~ 25316 of the Health and Safety Code if the person owning or operating the underground storage tank has been issued a hazardous waste facilities permit for the underground storage tank by the Department of Toxic Substances Control pursuant to section 25200 of the Health and Safety Code or granted interim status under section 25200.5 of the Health and Safety Code.
 - (15) A tank and associated piping located in a vault or basement and which meets the requirements of section 25283.5 of the Health and Safety Code.
 - (16) Any structure specifically exempted by section 25281(y) of the Health and Safety Code.
- (b) Sumps which are a part of a monitoring system required under Article 3 are considered part of the secondary containment or leak detection system of the primary containment and are required to meet the appropriate construction criteria.
 - (c) The owner of a farm or heating oil tank or any tank which is exempt from regulation as an underground storage tank by virtue of its use shall, prior to any change which results in the tank becoming subject to regulation, obtain a valid operating permit.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25283.5 and 25299.1, Health and Safety Code; ~~and~~ 40 CFR §§ 280.10, 280.12.

Article 3. New Underground Storage Tank Design, Construction, and Monitoring Requirements

§ 2631. Design and Construction Requirements for New Underground Storage Tanks.

- (a) All new underground storage tanks including associated piping used for the storage of hazardous substances shall have primary and secondary containment. Primary containment shall be product-tight. Secondary containment may be manufactured as an integral part of the primary containment or it may be constructed as a separate containment system. Secondary containment systems shall be designed and constructed such that the secondary containment system can be periodically tested in accordance with section 2637~~(a)~~.
- (b) Except as provided in ~~subdivision subsection~~-(j) below, the design and construction of all primary containment including any integral secondary containment system, shall be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. Except as provided in

~~subdivision subsection (j) below~~, all other components used to construct the primary containment system, such as special accessories, fittings, coatings or linings, monitoring systems, and level controls shall also be approved by an independent testing organization. ~~This requirement~~ These requirements became effective on July 1, 1991 for underground storage tanks; January 1, 1992 for piping; and ~~shall be effective on~~ January 1, 1995 for all other components. The exterior surface of underground storage tanks shall bear a marking, code stamp, or label showing the following minimum information:

- (1) Engineering standard used;
 - (2) Nominal diameter in feet;
 - (3) Nominal capacity in gallons;
 - (4) Degree of secondary containment;
 - (5) Useable capacity in gallons;
 - (6) Design pressure in ~~psig~~ pounds per square inch gauge;
 - (7) Maximum operating temperature in degrees Fahrenheit;
 - (8) Construction materials;
 - (9) Year manufactured; and
 - (10) Identity of manufacturer.
- (c) A primary containment system with or without an integral secondary containment system shall have wear plates (striker plates) installed, center to center, below all accessible openings. The plates shall be made of steel or other appropriate material if steel is not compatible with the hazardous substance stored. The width of the plate shall be at least eight inches on each side, or shall be equal to the area of the accessible opening or guide tube, whichever is larger. The thickness of the steel plate shall be at least 1/8 inch and those made of other materials shall be of sufficient thickness to provide equivalent protection. The plate, if under 1/4 inch thick, shall be rolled to the contours of the underground storage tank and all plates shall be bonded or tack welded in place. A drop tube-mounted bottom protector may fulfill this requirement.
- (d) A secondary containment system which is not an integral part of primary containment shall be designed and constructed according to an engineering specification approved by a state registered professional engineer or according to a nationally recognized industry code or engineering standard. The engineering specification shall include the construction procedures. Materials used to construct the secondary containment system shall have sufficient thickness, density, and corrosion resistance to prevent structural weakening or damage to the secondary containment system as a result of contact with any released hazardous substance. The following requirements apply to these secondary containment systems:
- (1) The secondary containment system shall be constructed to contain at least the following volumes:

- (A) One hundred percent of the usable capacity of the primary containment system where only one primary container is within the secondary containment system.
- (B) In the case of multiple primary containers within a single secondary containment system, the secondary containment system shall be large enough to contain 150 percent of the volume of the largest primary container within it, or 10 percent of the aggregate internal volume of all primary containers within the secondary containment system, whichever is greater. When all primary containers are completely enclosed within the secondary containment system, the restrictions of this subdivision subsection do not apply.
- (2) If the secondary containment system is open to rainfall, it shall be constructed to accommodate the volume of precipitation which could enter the secondary containment system during a 24-hour, 25-year storm in addition to the volume specified in subdivision subsection (d)(1) above.
- (3) If backfill material is placed in the secondary containment system, the volumetric requirements for the pore space shall be equal to the requirement in subdivision subsection (d)(1) above. The available pore space in the secondary containment system backfill shall be determined using standard engineering methods and safety factors. The specific retention and specific yield of the backfill material, the location of any primary container within the secondary containment, and the proposed method of operation for the secondary containment system shall be considered in determining the available pore space.
- (4) The secondary containment system shall be equipped with a collection system to accumulate, temporarily store, and permit removal of any liquid within the system.
- (5) The floor of the secondary containment system shall be constructed on a firm base and, if necessary for monitoring, shall be sloped to a collection sump. One or more access casings shall be installed in the sump and sized to allow removal of collected liquid. The access casing shall extend to the ground surface, be perforated in the region of the sump, and be covered with a locked waterproof cap or enclosed in a surface security structure that will protect the access casing(s) from entry of surface water, accidental damage, unauthorized access, and vandalism. A facility with locked gates will satisfy the requirements for protection against unauthorized access and vandalism. The casing shall have sufficient thickness to withstand all anticipated stresses with appropriate engineering safety factors and constructed of materials that will not be structurally weakened by the stored hazardous substance and will not donate, capture, or mask constituents for which analyses will be made.
- (6) Secondary containment systems using membrane liners shall be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. A membrane liner shall contain no primary nutrients or food-like substances attractive to rodents and shall meet the requirements in Table 3.1 after a 30-day immersion in the stored hazardous substance.

Table 3.1
Standards for Membrane Liners
Some Acceptable Test Methods
(See Appendix I, Table A)

Property	Unsupported Liners	Supported Liners	Requirement
(A) Tensile strength	ASTM D638	ASTM D751	
Tensile strength at yield		Procedure B (Cut Strip Method)	>300 lbs./in/ of width
Tensile strength at break			>200lbs./in/ of width
(B) Permeability	ASTM E96	ASTM E96	<.0.65 gram/meter ² -hr
(C) Seam strength	ASTM D413	ASTM D751	=Parent material
(D) Solubility	ASTM D471	ASTM 471	<10% by weight
(E) Puncture	FTMS 101C	FTMS 101C	350 lbs.
	Method 2065	Method 2031	80 lbs.
(F) Tear	ASTM D1004	ASTM D751	125 lbs.
	DIEC		50 lbs.

- (7) A membrane liner, if used, shall be installed under the direct supervision of a representative of the membrane liner fabricator or a contractor certified by the fabricator.
- (8) The excavation base and walls for a membrane liner shall be prepared to the membrane liner fabricator's specifications and shall be firm, smooth, and free of any sharp objects or protrusions.
- (9) The site shall be assessed to ensure that the secondary containment is always above the ground water and not in a 25-year flood plain, unless the containment and monitoring designs are for use under such conditions.
- (e) Laminated, coated, or clad materials shall be considered ~~a single wall~~ single-walled and do not fulfill the requirements of both primary and secondary containment.
- (f) Underground storage tanks with integral secondary containment systems, which satisfy the construction requirements of subdivision subsection (b) above, fulfill the volumetric requirements for secondary containment specified in subdivision subsection (d)(1) above.
- (g) Underground storage tanks with secondary containment systems shall be so designed and installed so that any loss of a hazardous substance from the primary containment will be detected by an interstitial monitoring device or method.
- (h) An underground storage tank which contains motor vehicle fuel and which is designed with an integral secondary containment system shall provide 100 percent secondary containment unless it is equipped with ~~the overfill prevention system equipment~~ in accordance with section 2635 ~~(b)(2)(c)(1)(C)~~. In this case, the top portion of the tank, no greater than two feet wide along the length of the tank, may be single-walled.
- (i) Tanks designed and constructed pursuant to the provisions of this section shall be monitored according to the provisions of section 2632.

- (j) Effective June 1, 2012, if an independent testing organization approval for containment or components described in subdivision subsection (b) above, does not include the compatibility of the hazardous substance stored or to be stored, an owner or operator may submit to the local agency a written, affirmative statement of compatibility for the specific hazardous substance from the manufacturer(s) of the containment or components. The written, affirmative statement of compatibility along with the independent testing approval specified in subdivision (b) above, shall satisfy the requirements in subdivision subsection (b) above, that all primary containment including any integral secondary containment system and all other components used to construct the primary containment system be approved by an independent testing organization as compatible with the specific hazardous substance stored or to be stored. If an affirmative statement of compatibility made by a manufacturer conflicts with a later determination by an independent testing organization on the compatibility of the hazardous substance stored or to be stored, the written, affirmative statement of compatibility shall no longer satisfy the compatibility requirements of subsection subdivision (b) above.
- (k) Subdivision Subsection (j) above, applies only to underground storage tanks that meet the construction requirements contained in Health and Safety Code section sections 25291, excluding subdivision (a)(7), paragraphs (1)-(6), inclusive and subdivisions (b)-(i), inclusive, section-25290.1, or section-25290.2, as applicable.
- (l) On and after the effective date of this subdivision, owners or operators shall demonstrate compatibility, 30 days before beginning to store or changing the hazardous substance, for all components used to construct the underground storage tank system which may come into contact with the hazardous substance to be stored and are not subject to subdivisions (b) or (d) above, such as spill containers, overfill prevention equipment, and ancillary equipment, by submitting to the local agency one of the following:
- (1) A written approval from an independent testing organization, in accordance with industry codes, voluntary consensus standards, or engineering standards, for use with the hazardous substance to be stored;
 - (2) A written approval from a state registered professional engineer for use with the hazardous substance to be stored. The approval shall contain an affirmative statement of compatibility with the substance and a specified acceptable range of blends or concentrations of the substance. The component shall be designed and constructed according to an engineering specification. The engineering specification shall include the construction procedures. Materials used to construct the component shall have sufficient corrosion resistance to prevent damage to the component as a result of contact with the hazardous substance; or
 - (3) A written affirmative statement of compatibility from the manufacturer(s) of the components for use with the hazardous substance to be stored. The statement shall contain an affirmative statement of compatibility with the hazardous substance and a specified acceptable range of blends or concentrations of the hazardous substance.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1 and 25291, Health and Safety Code; and 40 CFR §§ 280.20 and 280.32.

§ 2634. Monitoring and Response Plan Requirements for New Underground Storage Tanks Containing Motor Vehicle Fuel and Constructed Pursuant to Section 2633.

- (a) This section applies only to underground storage tanks containing motor vehicle fuel and which are constructed in accordance with section 2633.
- (b) Owners or operators of tanks which are constructed pursuant to section 2633 and which contain motor vehicle fuel shall implement a monitoring program approved by the local agency and specified in the tank operating permit.
- (c) New tanks which contain motor vehicle fuel and which are constructed in accordance with section 2633 shall be monitored as follows:
 - (1) The leak interception and detection system shall be monitored in accordance with ~~subsection-subdivision (d) below of this section;~~
 - (2) ~~The motor vehicle fuel inventory shall be reconciled according to the performance requirements in section 2646. On and after the effective date of this paragraph, the motor vehicle fuel tank shall be monitored according to the requirements of section 2643;~~ and;
 - (3) All underground piping shall be tested and monitored in accordance with section 2636.
- (d) Before implementing a monitoring program, the owner or operator shall demonstrate to the satisfaction of the local agency that the program is effective in detecting an unauthorized release from the primary container before it can escape from the leak interception and detection system. A monitoring program for leak interception and detection systems shall meet the following requirements:
 - (1) The system shall detect any unauthorized release of the motor vehicle fuel using either:
 - (A) One or more of the continuous monitoring methods provided in Table 3.2. The system shall be connected to an audible and visual alarm system approved by the local agency; or;
 - (B) Manual monitoring. If this method is used, it shall be performed daily, except on weekends and recognized state and/or federal holidays, but no less than once in any ~~72-hour~~ 72-hour period. Manual monitoring may be required on a more frequent basis as specified by the local agency.
 - (2) The owner or operator shall prepare a written procedure for routine monitoring, submitted on the "Underground Storage Tank Monitoring Plan" in Title 27, Division 3, Subdivision 1, Chapter 6, which establishes:
 - (A) The frequency of performing the monitoring;
 - (B) The methods and equipment to be used for performing the monitoring;
 - (C) The location(s) where the monitoring will be performed;
 - (D) The name(s) and title(s) of the person(s) responsible for performing the monitoring and/or maintaining the equipment;

- (E) The reporting format;
 - (F) The preventive maintenance schedule for the monitoring equipment. The maintenance schedule shall be in accordance with the manufacturer's instructions; and
 - (G) A description of the training necessary for the operation of both the tank system and the monitoring equipment.
- (3) For methods of monitoring where the presence of the hazardous substance is not determined directly, for example, where liquid level measurements are used as the basis for determination (i.e., liquid level measurements), the monitoring program shall specify the proposed method(s) for determining the presence or absence of the hazardous substance if the indirect method indicates a possible unauthorized release of motor vehicle fuel.
- (e) A response plan for an unauthorized release shall be developed before the underground storage tank system is put into service. If the leak interception and detection system meets the volumetric requirement of section 2631(d), the local agency shall require the owner to develop a response plan pursuant to the requirements of subsection 2632(d)(2). If the leak interception and detection system does not meet the volumetric requirements of section 2631(d)(1) through (5), the response plan shall consider the following:
- (1) The volume of the leak interception and detection system in relation to the volume of the primary container;
 - (2) The amount of time the leak interception and detection system shall provide containment in relation to the period of time between detection of an unauthorized release and cleanup of the leaked substance;
 - (3) The depth from the bottom of the leak interception and detection system to the highest anticipated level of ground water;
 - (4) The nature of the unsaturated soils under the leak interception and detection system and their ability to absorb contaminants or to allow movement of contaminants; and
 - (5) The methods and scheduling for removal all of the hazardous substances which may have been discharged from the primary container and are located in the unsaturated soils between the primary container and ground water, including the leak interception and detection system sump.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25291 and 25292, Health and Safety Code; [and](#) 40 CFR [§](#) 280.41.

§ 2635. Installation and Testing Requirements for All New Underground Storage Tanks.

- (a) Primary and secondary containment systems shall be designed, constructed, tested, and certified to comply, as applicable, with all of the following requirements:

- (1) All underground storage tanks shall be tested at the factory before being transported. The tests shall determine whether the tanks were constructed in accordance with the applicable sections of the industry code or engineering standard under which they were built.
- (2) The outer surface of underground storage tanks constructed of steel shall be protected from corrosion as follows, except that primary containment systems installed in a secondary containment system and not backfilled do not need cathodic protection:
 - (A) Field-installed cathodic protection systems shall be designed and certified as adequate by a corrosion specialist. The cathodic protection systems shall be tested by a cathodic protection tester within six months of installation and at least once every ~~three years~~ 36 months thereafter. The criteria that are used to determine that cathodic protection is adequate as required by this section shall be in accordance with a code of practice developed in accordance with voluntary consensus standards. Impressed-current cathodic protection systems shall also be inspected no less than every 60 ~~calendar~~ days to ensure that they are in proper working order.
 - (B) Underground storage tanks protected with fiberglass-reinforced plastic coatings, composites, or equivalent non-metallic exterior coatings or coverings, including coating/sacrificial anode systems, shall be tested at the installation site using an electric resistance holiday detector. All holidays detected shall be repaired and checked by a factory authorized repair service before installation. During and after installation, care shall be taken to prevent damage to the protective coating or cladding. ~~Preengineered~~ Pre-engineered corrosion protection systems with sacrificial anodes shall be checked once every ~~three years~~ 36 months in accordance with the manufacturer's instructions.
- (3) Before installation, the tank shall be tested for tightness at the installation site in accordance with the manufacturer's written guidelines. If there are no guidelines, the primary and secondary containment shall be tested for tightness with air pressure at not less than ~~3~~ three pounds per ~~square-inch~~ square inch (20.68 ~~k Pa~~ kilopascals) and not more than ~~5~~ five pounds per ~~square-inch~~ square inch (34.48 ~~k Pa~~ kilopascals). In lieu of the above, an equivalent differential pressure test, expressed in inches of mercury vacuum, in the interstitial space of the secondary containment, is acceptable. The pressure (or vacuum in the interstitial space) shall be maintained for a minimum of 30 minutes to determine if the tank is tight. If a tank fails the tightness test, as evidenced by soap bubbles, or water droplets, installation shall be suspended until the tank is replaced or repaired by a factory authorized repair service. Following repair or replacement, the tank shall pass a tightness test.
- (4) All secondary containment systems shall pass a post- installation test which meets the approval of the local agency.
- (5) After installation, but before the underground storage tank is placed in service, a tank integrity test shall be conducted to ensure that no damage occurred during installation. The tank integrity test is not required if the tank is equipped with an interstitial monitor certified by a third-party ~~third party~~ evaluator to meet the performance standards of a "tank integrity test" as defined in section 2611, or if the tank is tested using another method deemed by the State Water Resources Control Board to be equivalent.

- (6) All underground storage tanks shall be installed according to a code of practice developed in accordance with voluntary consensus standards and the manufacturer's written installation instructions. The owner or operator shall certify that the underground storage tank was installed in accordance with the above requirements as required by subdivision ~~(e)~~(f) of this section.
- (7) All underground storage tanks subject to flotation shall be anchored using methods specified by the manufacturer or, if none exist, shall be anchored according to the best engineering judgment.
- (b) All underground storage tanks shall be equipped with a spill container ~~and an overflow prevention system as follows:~~
- ~~(1) The spill container shall collect~~ that collects any hazardous substances spilled during product delivery operations to prevent the hazardous substance from entering the subsurface environment. The spill container shall meet all of the following ~~requirements:~~
- ~~(A)~~(1) If it is made of metal, the exterior wall shall be protected from galvanic corrosion.
- ~~(B)~~(2) It shall have a minimum capacity of five gallons (19 liters).
- ~~(C)~~(3) It shall have a drain valve which allows drainage of the collected spill into the primary container or provide a means to keep the spill container empty.
- ~~(2)(c) (1) The~~ All underground storage tanks that do not meet paragraph (2) below shall be equipped with overflow prevention ~~system shall equipment that does~~ not allow for manual override and ~~shall meet~~ meets one of the following requirements:
- (A) Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; ~~or~~
- (B) Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; ~~or~~
- (C) Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; ~~or;~~
- (D) Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
- ~~(3)(2)~~ The local agency may waive the requirement for overflow prevention equipment where the tank inlet exists in an observable area, the spill container is adequate to collect any overflow, and the tank system is filled by transfers of no more than 25 gallons at one time.
- (d) On and after the effective date of this subdivision, flow restrictors on vent piping do not meet the requirement of subdivision (c) above when overflow prevention equipment is installed.
- ~~(e)~~(e) Secondary containment systems including leak interception and detection systems installed pursuant to section 2633 shall comply with all of the following:

- (1) The secondary containment system shall encompass the area within the system of vertical planes surrounding the exterior of the primary containment system. If backfill is placed between the primary and secondary containment systems, an evaluation shall be made of the maximum lateral spread of a point leak from the primary containment system over the vertical distance between the primary and secondary containment systems. The secondary containment system shall extend an additional distance beyond the vertical planes described above equal to the radius of the lateral spread plus one foot.
 - (2) The secondary containment system shall be capable of preventing the inflow of the highest ground water anticipated into the interstitial space during the life of the tank.
 - (3) If the interstitial space is backfilled, the backfill material shall not prevent the vertical movement of leakage from any part of the primary containment system.
 - (4) The secondary containment system with backfill material shall be designed and constructed to promote gravity drainage of an unauthorized release of hazardous substances from any part of the primary containment system to the monitoring location(s).
 - (5) Two or more primary containment systems shall not use the same secondary containment system if the primary containment systems store materials that in combination may cause a fire or explosion, or the production of a flammable, toxic, or poisonous gas, or the deterioration of any part of the primary or secondary containment system.
 - (6) Drainage of liquid from within a secondary containment system shall be controlled in a manner approved by the local agency to prevent hazardous materials from being discharged into the environment. The liquid shall be analyzed to determine the presence of any of the hazardous substance(s) stored in the primary containment system prior to initial removal, and ~~monthly~~ every 30 days thereafter, for any continuous discharge (removal) to determine the appropriate method for final disposal. The liquid shall be sampled and analyzed immediately upon any indication of an unauthorized release from the primary containment system.
 - (7) For primary containment systems installed completely beneath the ground surface, the original excavation for the secondary containment system shall have a water-tight cover which extends at least one foot beyond each boundary of the original excavation. This cover shall be asphalt, reinforced concrete, or equivalent material which is sloped to drainways leading away from the excavation. Access openings shall be constructed as water-tight as practical. Primary containment systems with integral secondary containment and open vaults are exempt from the requirements of this subdivision.
 - (8) The actual location and orientation of the tanks and appurtenant piping systems shall be indicated on as-built drawings of the facility. Copies of all drawings, photographs, and plans shall be submitted to the local agency for approval.
- ~~(d)~~(f) Owners or their agents shall certify that the installation of the tanks and piping meets the conditions in paragraph (1) through (4) below. The certification shall be made on the "UST Certification of Installation/ Modification" submittal element in the California Environmental Reporting System or a local reporting portal.

- (1) The installer has met the requirements set forth in ~~section sections~~ 2715, ~~subdivisions (g)(d) and (h)(e)~~;
- (2) The underground storage tank, any primary piping, and any secondary containment, was installed according to applicable voluntary consensus standards and any manufacturer's written installation instructions;
- (3) All work listed in the manufacturer's installation checklist has been completed; and
- (4) The installation has been inspected and approved by the local agency, or, if required by the local agency, inspected and certified by a registered professional engineer who has education and experience with underground storage tank system installations.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25290.1, 25290.2, 25291, 25299 and 25404, Health and Safety Code; and 40 CFR §§ 280.20, 280.31, 280.40, 280.41, 280.42, 280.43, 280.44 and 280.45

§ 2636. Design, Construction, Installation, Testing, and Monitoring Requirements for Piping.

- (a) Except as provided below, piping connected to tanks which were installed after July 1, 1987, shall have secondary containment that complies with the requirements of section 2631 for new underground storage tanks. This requirement does not apply to ~~piping described as follows: any of the following:~~
 - (1) Vent or tank riser piping, provided the primary containment system is equipped with ~~an~~ overfill prevention ~~equipment system~~ meeting the requirements specified in sections 2635 ~~(b)(2)(c)(1)~~(B) or (C); ~~or,~~
 - (2) Vapor recovery piping if designed so that it cannot contain liquid-phase product; ~~or,~~
 - (3) Suction piping if the piping is designed, constructed, and installed as follows:
 - (A) The below-grade piping operates at less than atmospheric pressure (suction piping);
 - (B) 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 (gravity-flow piping);
 - (C) No valves or pumps are installed below grade in the suction line. Only one check valve is located directly below and as close as practical to the suction pump; and
 - (D) An inspection method is provided which readily demonstrates compliance with subparagraphs (A) through (C) above.
- (b) All corrodible underground piping, if in direct contact with backfill material, shall be protected against corrosion. Piping constructed of fiberglass-reinforced plastic, steel with cathodic protection, or steel isolated from direct contact with backfill, fulfills this corrosion protection requirement. Cathodic protection shall meet the requirements of section 2635(a)(2).
- (c) Underground primary piping shall meet all of the following requirements:

- (1) Primary piping in contact with hazardous substances under normal operating conditions shall be installed inside a secondary containment system which may be a secondary pipe, vault, or a lined trench. All secondary containment systems shall be sloped so that all releases will flow to a collection sump located at the low point of the underground piping.
 - (2) Primary piping and secondary containment systems shall be installed in accordance with an industry code of practice developed in accordance with voluntary consensus standards. The owner or operator shall certify that the piping was installed in accordance with the above requirements of section 2635 ~~(d)~~(f). The certification shall be made on the "UST Certification of Installation/ Modification" submittal element in the California Environmental Reporting System or a local reporting portal.
- (d) Lined trench systems used as part of a secondary containment system shall be designed and constructed according to a code of practice or engineering standard approved by a state registered professional engineer. The following requirements shall also apply:
- (1) All trench materials shall be compatible with the substance stored and evaluated by an independent testing organization for their compatibility or adequacy of the trench design, construction, and application.
 - (2) The trench shall be covered and capable of supporting any expected vehicular traffic.
- (e) All new primary piping and secondary containments systems shall be tested for tightness after installation in accordance with manufacturer's guidelines. Primary pressurized piping shall be tested for tightness hydrostatically at 150 percent of design operating pressure or pneumatically at 110 percent of design operating pressure. If the calculated test pressure for pressurized piping is less than 40 ~~psi pounds per square inch~~, 40 ~~psi-pounds per square inch~~ shall be used as the test pressure. The pressure shall be maintained for a minimum of 30 minutes and all joints shall be soap tested. A failed test, as evidenced by the presence of bubbles, shall require appropriate repairs and retesting. If there are no manufacturer's guidelines, secondary containment systems shall be tested using an applicable method specified in an industry code or engineering standard. Suction piping and gravity flow piping which cannot be isolated from the tank shall be tested after installation in conjunction with an overfilled volumetric tank integrity test or other test method meeting the requirements of section 2643(f), if approved by the local agency.
- (f) Underground piping with secondary containment, including under-dispenser piping with secondary containment, shall be equipped and monitored with monitoring systems as follows:
- (1) All secondary containment, including under-dispenser containment, and under-dispenser spill control or containment systems shall be equipped with a continuous monitoring system that either activates an audible and visual alarm or stops the flow of product at the dispenser when it detects a leak.
 - (2) Automatic line leak detectors shall be installed on underground pressurized piping and shall be capable of detecting a ~~3-gallon~~ three gallons per hour leak rate at 10 ~~psi-pounds~~ per square inch within ~~4~~ one hour with a probability of detection of at least 95 percent and a probability of false alarm no greater than ~~5~~ five percent, and shall restrict or shut off the flow of product through the piping when a leak is detected.

~~—[Editor's note: Version of (f)(3) in effect prior to 1-17-2008.]~~

~~(3) Until November 9, 2004, other monitoring methods may be used in lieu of the requirement in paragraph (2) if it is demonstrated to the satisfaction of the local agency that the alternate method is as effective as the methods otherwise required by this section. Continuous monitoring systems as described in paragraph (1), which shut down the pump in addition to either activating the audible and visual alarm or stopping the flow of product at the dispenser, satisfy the automatic line leak detector requirement of paragraph (2).~~

~~—[Editor's note: Version of (f)(3) effective 1-17-2008.]~~

~~(3) Until November 9, 2004, other monitoring methods may be used in lieu of the requirement in paragraph (2) if it is demonstrated to the satisfaction of the local agency that the alternate method is as effective as the methods otherwise required by this section. As an example, continuous monitoring systems as described in paragraph (1), which shut down the pump in addition to either activating the audible and visual alarm or stopping the flow of product at the dispenser, satisfy the automatic line leak detector requirement of paragraph (2), for purposes of this subdivision (f)(3).~~

~~(4)~~(3) Monitoring shall be conducted on all underground pressurized piping with secondary containment at least once every 12 months annually at a pressure designated by the equipment manufacturer, provided that the method is capable of detecting a minimum release equivalent to 0.1 ~~gallon~~ gallons per hour defined at 150 percent of the normal operating pressure of the product piping system at the test pressure with at least a 95 percent probability of detection and not more than a ~~5-five~~ percent probability of false alarm.

~~(5)~~(4) Continuous monitoring systems as described in ~~subdivision (f) paragraph (1) above,~~ satisfy the ~~annual~~ tightness testing requirement of ~~subdivision (f)(4) paragraph (3) above,~~ if both of the following conditions are met:

(A) The monitoring system shuts down the pump or stops the flow of product at the dispenser when a leak is detected in the under-dispenser containment.

(B) The monitoring system for all product piping other than that contained in the under-dispenser containment is fail safe, and shuts down the pump when a leak is detected.

~~(6)~~(5) Emergency generator tanks systems with underground pressurized piping shall meet one of the following:

~~(A) For~~ Underground pressurized piping connected to an emergency generator tank systems system installed before the effective date of this subdivision, may use a continuous monitoring systems system as described in paragraph (1) above, which activate an audible and visual alarm in the event of a leak or a malfunction of the monitoring system satisfy the automatic line leak detector requirement of paragraph (2) above, ~~provided that the~~ The monitoring system ~~is shall be~~ checked at least daily by either remote electronic access or on-site visual inspections. A log of daily checks shall be available for local agency review upon request. By October 13, 2018, all underground pressurized piping connected to an emergency generator tank system shall meet section 2666(f).

(B) Underground pressurized piping connected to an emergency generator tank system installed on or after the effective date of this subdivision, shall be equipped with an automatic line leak detector in accordance with paragraph (2) above. In lieu of restricting or shutting off the flow of product through the piping, the automatic line leak detector may activate an audible and visual alarm when a leak is detected.

(g) Under-dispenser containment shall be designed, constructed, and installed in accordance with the following:

(1) Owners or ~~Operators~~ operators of ~~a UST an underground storage tank~~ system shall have the system fitted with under-dispenser containment, or an approved under-dispenser spill containment or control system, ~~according to the following schedule:~~

~~(A) At the time of installation for systems installed after January 1, 2000.~~

~~(B) By July 1, 2001, for systems installed after July 1, 1987 that are located within 1,000 feet of a public drinking water well, as identified pursuant to the state GeoTracker.~~

~~(C) By December 31, 2003, for systems not subject to paragraph (A) or (B).~~

(2) Under-dispenser containment shall be designed, constructed, installed, and monitored in accordance with ~~sections~~ section 2631, and subdivisions ~~2636~~(c)(2), ~~2636~~(e), and ~~2636~~(f) above.

(3) A manufacturer of an under-dispenser spill containment or control system may apply to the Division of Water Quality Underground Storage Tank Program Manager for approval of the system. Owners or operators shall not install an under-dispenser spill containment or control system that has not been approved.

(A) Applications for approval shall be submitted in writing and include the following:

(i) A description of the proposed system; ~~and~~.

(ii) Clear and convincing evidence that the system will protect the soil and beneficial uses of the waters of the state from unauthorized releases.

(B) The Program Manager shall review the application to determine if the proposed system adequately protects the soil and beneficial uses of groundwater before determining whether to approve the proposed system.

(C) The Program Manager may modify or revoke a previously issued approval if it finds that, based on new evidence, the approved system does not adequately protect the soil and beneficial uses of groundwater from unauthorized releases.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291, 25296.35, 25299 and 25404, Health and Safety Code; and 40 CFR §§ 280.10, 280.20, 280.31, 280.40, 280.41, 280.42, 280.43, 280.44 and 280.45.

§ 2637. Secondary Containment Testing.

(a) Secondary containment components shall meet one of the following:

(1) Test for tightness at all of the following times: Secondary containment systems installed on or after January 1, 2001 shall be tested

(A) Upon installation, ~~6~~six months after installation, and at least once every 36 months thereafter; ~~Secondary containment systems installed prior to January 1, 2001 shall be tested by January 1, 2003, and at least every 36 months thereafter.~~

(B) On and after the effective date of this subparagraph all of the following times:

(i) Within 30 days of the date of the completion of a repair; and

(ii) Within 30 days of the date of discontinuing the use of a method of continuous monitoring that automatically monitors the integrity of both the primary and secondary containment such as components that are hydrostatically monitored or under constant vacuum or pressure.

(2) Use a method of continuous monitoring that automatically monitors the integrity of both the primary and secondary containment such as components that are hydrostatically monitored or under constant vacuum or pressure.

(b) By December 31, 2002, the owner or operator of any secondary containment ~~system~~ systems that the owner or operator determines cannot be tested in accordance with this section shall replace the secondary containment system with a system that can be tested in accordance with this section. As an alternative, the owner or operator may submit a proposal and workplan for enhanced leak detection to the local agency in accordance with subdivisions 2644.1(a)(1), (2), (4), and (5) by July 1, 2002; complete the program of enhanced leak detection by December 31, 2002; and replace the secondary containment system with a system that can be tested in accordance with this section by July 1, 2005. The local agency shall review the proposed program of enhanced leak detection within 45 days of submittal or re-submittal.

(c) ~~Periodic~~The testing of secondary containment systems shall be conducted using a test procedure that demonstrates that the system performs at least as well as it did upon installation. For example, if the secondary containment system was tested upon installation by using a test method that applied a pressure of ~~5 psi~~ five pounds per square inch, then the periodic test must be conducted using a method that tests the system at an equivalent pressure. These tests shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, secondary containment systems must be tested using an applicable method specified in an industry code or engineering standard. If there are no applicable ~~manufacturers'~~ manufacturer's guidelines, industry codes, or engineering standards, a test method approved by a state registered professional engineer shall be used.

(d) Secondary containment ~~testing tests~~ shall be performed by ~~either~~ a service technician ~~or a licensed tank tester, both of which must meet~~ meeting the requirements of section 2715 ~~(f),~~ subdivision (i).

(e) On and after the effective date of this subdivision, the results of the secondary containment test shall be recorded on the "Secondary Containment Testing Report Form" located in Appendix VII.

~~(e)(f)~~ On and after the effective date of this subdivision, underground ~~Underground~~-storage tank owners and operators shall submit a copy of the ~~test report~~ "Secondary Containment Testing Report Form" to the local agency within 30 days of the completion of the secondary containment test.

~~(f)(g)~~ Owners and operators of underground storage tanks must notify the local agency at least 48 hours prior to conducting the secondary containment test, ~~unless this notification requirement is waived by the local agency.~~

~~(g)~~ Secondary containment systems where the continuous monitoring automatically monitors both primary and secondary containment, such as systems that are hydrostatically monitored or under constant vacuum, are exempt from periodic secondary containment testing.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25292, Health and Safety Code; and 40 CFR §§ 280.33, 280.35 and 280.41.

§ 2637.1. Spill Container Testing.

(a) Spill containers shall be tested for tightness at all of the following times:

(1) Upon the completion of an installation and every 12 months thereafter; and

(2) Within 30 days of the date of the completion of a repair.

(b) The spill container tests shall be conducted using a testing procedure that demonstrates that the spill container is capable of containing the stored substance until it is detected and cleaned up. These tests shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, the spill container shall be tested using an applicable method specified in an industry code or engineering standard. If there are no applicable manufacturer's guidelines, industry codes, or engineering standards, a test method approved by a state registered professional engineer shall be used.

(c) The spill container tests shall be performed by a service technician meeting the requirements of section 2715(f).

(d) The results of the spill container test shall be recorded on the "Spill Container Testing Report Form" located in Appendix VIII.

(e) Owners or operators shall submit a copy of the "Spill Container Testing Report Form" to the local agency within 30 days of the completion of the spill container test.

(f) Owners or operators shall notify the local agency at least 48 hours prior to conducting the spill container test.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25284.2, 25289, and 25292.1, Health and Safety Code; and 40 CFR §§ 280.33 and 280.35.

§ 2637.2. Overfill Prevention Equipment Inspection.

(a) Owners or operators of underground storage tanks that do not meet section 2635(c)(2) shall meet one the following:

(1) Underground storage tanks installed before the effective date of this subdivision shall have the overfill prevention equipment inspected at all of the following times:

(A) Once by October 13, 2018 and every 36 months thereafter; and

(B) Within 30 days of the date of the completion of a repair.

(2) Underground storage tanks installed on or after the effective date of this subdivision shall have the overfill prevention equipment inspected at all of the following times:

(A) Upon the completion of an installation and every 36 months thereafter; and

(B) Within 30 days of the date of the completion of a repair.

(b) Overfill prevention equipment inspections shall be conducted using an inspection procedure that demonstrates that the overfill prevention equipment is set to activate at the correct level specified in section 2635(c)(1) and will activate when regulated stored substance reaches that level. These inspections shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, the overfill prevention equipment shall be inspected using an applicable method specified in an industry code or engineering standard. If there are no applicable manufacturer's guidelines, industry codes, or engineering standards, an inspection method approved by a state registered professional engineer shall be used.

(c) Overfill prevention equipment inspections shall be performed by a service technician meeting the requirements of section 2715(f).

(d) The results of the overfill prevention equipment inspection shall be recorded on the "Overfill Prevention Equipment Inspection Report Form" located in Appendix IX.

(e) Owners or operators shall submit a copy of the "Overfill Prevention Equipment Inspection Report Form" to the local agency within 30 days of the completion of the overfill prevention equipment inspection.

(f) Owners or operators shall notify the local agency at least 48 hours prior to conducting the inspection.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25289 and 25292.1, Health and Safety Code; and 40 CFR §§ 280.20, 280.33 and 280.35.

§ 2638. ~~Annual~~ Certification of Monitoring Equipment.

- (a) All monitoring equipment used to satisfy the requirements of this article shall be installed, calibrated, operated and maintained in accordance with manufacturer's instructions, and certified every 12 months for operability, proper operating condition, and proper calibration. Written records shall be maintained as required in section 2712.
- (b) Persons performing installation, repair, maintenance, calibration, or ~~annual~~ certification of monitoring equipment shall meet the requirements set forth in section 2715(~~f~~), ~~subdivision (f)~~.
- (c) ~~Annual~~ The monitoring equipment certification shall be made on a "Monitoring System Certification Form" ~~form (see located in~~ Appendix VI).
- (d) ~~UST owners and~~ Owners or operators shall submit a completed "Monitoring System Certification Form" ~~form~~ to the local agency within 30 days after completion of the inspection.
- (e) The ~~UST~~ owner or operator shall notify the local agency at least 48 hours prior to conducting the installation, repair, replacement, calibration, or certification of monitoring equipment ~~unless the notification requirement is waived by the local agency.~~
- (f) A person conducting ~~UST~~ underground storage tank monitoring equipment certification shall affix a tag/sticker on each monitoring equipment component that is being certified, repaired, or replaced. The tag/sticker shall be placed in a readily visible location and shall include the date the ~~UST~~ underground storage tank component was certified, repaired, or replaced, and the contractor's or tank tester's license number.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25292, Health and Safety Code; and 40 CFR §§ 280.36, 280.40 and 280.41.

Article 4. Existing Underground Storage Tank Monitoring Requirements

§ 2640. General Applicability of Article.

- (a) The requirements of this article apply to owners or operators of existing underground storage tanks.
- (b) The requirements of this article apply during the following periods:
 - (1) Any operating period, including any period during which the tank is empty as a result of withdrawal of all stored substances before input of additional hazardous substances;

- (2) Any period during which hazardous substances are stored in the tank, and no filling or withdrawal is conducted; and
- (3) Any period between cessation of the storage of hazardous substances and the actual completion of closure, pursuant to Article 7, unless otherwise specified by local agency, pursuant to section 2671(b), during a temporary closure period.
- (c) This article shall not apply to underground storage tanks that are designed, constructed, installed, and monitored in accordance with Article 3.
- (d) ~~Owners or operators of tanks monitored pursuant to section 25292(b)(5)(A) of the Health and Safety Code shall comply with the requirements of section 2645. Tank systems having a capacity of more than 2,000 gallons shall not be monitored pursuant to section 25292(b)(5)(A) of the Health and Safety Code. On and after the effective date of this subdivision, tanks shall not be monitored pursuant to section 25292(b)(5)(A) of the Health and Safety Code.~~
- (e) An owner or operator of an underground storage tank system with a single-walled component that is located within 1,000 feet of a public drinking water well, as notified by the board according to its Geographic Information System mapping database, shall implement a program of enhanced leak detection or monitoring for that tank system in accordance with section 2644.1. Additionally, the following conditions for enhanced leak detection shall apply:
- (1) For the purpose of section 2644.1, vent or tank riser piping, vapor recovery piping, and suction piping that meet the definitions of section 2636(a)(1), (2), or (3), are not considered single-walled components.
- (2) Owners or operators notified by the board who believe that their facility is not subject to this requirement may request reconsideration by the Division of Clean Water Programs Underground Storage Tank Program Manager. The request shall be in writing and received by the Underground Storage Tank Program Manager within 60 ~~calendar~~ days of the date the notification was mailed. The Program Manager shall make a decision on the request, and notify the applicable local agency of this decision, within 90 ~~calendar~~ days of receipt of the request.
- (3) The request for reconsideration must include the name and address of the subject facility, the name and address of the owner or operator submitting the request, and the reason(s) why the requester believes the board notification was in error. If the request is based on evidence that the ~~UST underground storage tank~~ system in question is greater than 1,000 feet from a public drinking water well, the request shall include a demonstration that the center of the ~~well head wellhead~~ is more than 1,000 ~~ft-feet~~ from the closest component of the ~~UST underground storage tank~~ system. If the request is based on evidence that the subject ~~UST underground storage tank~~ system does not have a single-walled component, the request shall include supporting documentation. A copy of the request shall be concurrently submitted to the local agency.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25292 and 25292.4, Health and Safety Code; and 40 CFR 280.40, 280.41, 280.42 and 280.43(b).

§ 2640.1. Method of Demonstrating Compatibility.

(a) On and after the effective date of this section, 30 days before changing to a hazardous substance containing a concentration greater than 10 percent ethanol or five percent biodiesel, owners or operators shall demonstrate compatibility of the all primary containment with the substance to be stored, including any special accessories, fittings, coatings, or linings, by submitting to the local agency a written approval from an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25286, and 25299, Health and Safety Code; and 40 CFR §§ 280.11 and 280.32.

§ 2643. Non-Visual Monitoring/Quantitative Release Detection Methods.

(a) Non-visual quantitative release detection methods shall comply with the requirements of this section. Subdivision (b) contains monitoring requirements for underground storage tanks; subdivision (c) for pressurized piping; subdivision (d) for suction piping; and subdivision (e) for gravity-flow piping. Examples of release detection methods that may be used to meet the requirements of this section are in Appendix III.

(b) Quantitative release detection ~~method~~ methods used to monitor underground storage tanks shall be conducted according to one of the methods listed in paragraphs (1) through ~~(5)~~(4) below. These quantitative monitoring methods shall meet the requirements of section 2643(f) and shall be capable of detecting release rates specified in this section with at least a 95 percent probability of detection and not more than a ~~5~~five percent probability of false alarm.

(1) Automatic tank gauge -

The automatic tank gauge shall test the tank at least once ~~per month~~ every 30 days after product delivery or when the tank is filled to within 10 percent of the highest operating level during the previous ~~month~~ 30 days and shall be capable of detecting a release of 0.2 ~~gallon~~ gallons per hour. The automatic tank gauge shall generate a hard copy of all data reported including time and date, tank identification, fuel depth, water depth, temperature, liquid volume, and the duration of the test. Automatic tank gauge systems installed on or after January 1, 1995, shall also generate a hard copy of the calculated leak rate and leak threshold.

~~(2) Automatic tank gauge plus manual inventory reconciliation—~~

~~The automatic tank gauge shall test the tank at least once per month when the product level in the tank is at least three feet and shall be capable of detecting a release of 0.1 gallon per hour. The automatic tank gauge shall generate hard copies of data as specified in subdivision (b)(1) above. In addition, manual inventory reconciliation shall be conducted in accordance with section 2646 (except for subdivision [b]).~~

~~(3)~~(2) Statistical inventory reconciliation plus tank integrity testing -

Statistical inventory reconciliation shall be conducted at least once ~~per month every 30 days~~ in accordance with section 2646.1 and shall be capable of detecting a release of 0.2 ~~gallon gallons~~ per hour. In addition, a tank integrity test shall be conducted at least once every ~~two years~~ 24 months in accordance with section 2643.1. On and after the effective date of this paragraph, statistical inventory reconciliation shall report a quantitative leak rate using a threshold value that does not exceed one-half the minimum detectable leak rate at least once every 30 days.

(3) Continuous in-tank leak detection -

On and after the effective date of this paragraph, continuous in-tank leak detection shall be capable of detecting an unauthorized release of 0.2 gallons per hour. Continuous in-tank leak detection shall operate on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

~~(4) Manual inventory reconciliation plus tank integrity testing -~~

~~Manual inventory reconciliation shall be conducted at least once per month in accordance with section 2646 and shall be capable of detecting a release of 1.0 gallon per hour. In addition, a tank integrity test shall be conducted once per year in accordance with section 2643.1.~~

~~(5)~~(4) Other test methods -

Other equivalent test methods may be used following review by the State Water Board for compliance with this subdivision and subdivision (f) below.

(c) Piping that conveys hazardous substances under pressure shall be monitored in accordance with paragraph ~~(e)~~(1), and either paragraph (2) or (3) below.

(1) Monitoring shall be conducted at least hourly at any pressure. The monitoring method shall be capable of detecting a release equivalent to 3.0 gallons per hour defined at 10 pounds per square inch pressure within one hour of its occurrence with at least a 95 percent probability of detection and not more than a ~~5~~five percent probability of false alarm. The leak detection method shall restrict or shut off the flow of product through the piping or trigger a visual and audible alarm if an unauthorized release occurs. If the use of piping is intermittent, leak detection monitoring is required only at the beginning or end of the period during which the piping is under pressure, but in any event there shall not be more than one hour between the time the equipment initiates the test and detection of an unauthorized release; and

(2) Monitoring shall be conducted at least ~~monthly~~ once every 30 days at any pressure. The monitoring method shall be capable of detecting a minimum release equivalent to 0.2 ~~gallon gallons~~ per hour defined at normal operating pressure; or,

(3) Monitoring shall be conducted at least ~~annually (once per calendar year)~~ every 12 months at a pressure designated by the equipment manufacturer. The monitoring method shall be capable of detecting a minimum release equivalent to 0.1 ~~gallon gallons~~ per hour defined at 150 percent (one and one half times) the normal operating pressure.

- (d) Piping that conveys hazardous substances under less than atmospheric pressure (suction piping) shall be tested at least once every ~~three years~~ 36 months at a pressure designated by the test equipment manufacturer. The test method shall be capable of detecting a minimum release equivalent to 0.1 ~~gallon~~ gallons per hour defined at a minimum of 40 ~~psi~~ pounds per square inch with at least a 95 percent probability of detection and not more than a ~~5 five~~ percent probability of false alarm. If the piping cannot be isolated from the tank for testing purposes, the piping shall be tested using an overfilled volumetric tank integrity test or other test method meeting the requirements of section 2643(f) if approved by the local agency. Daily monitoring shall be performed as described in Appendix II except for emergency generator systems, which may be monitored less often, but at least ~~monthly~~ once every 30 days. Written records describing the results of the monitoring shall be maintained in accordance with section 2712(b).
- (e) Piping that conveys hazardous substances by the force of gravity (excluding vertical drops) shall be monitored at least once every ~~two years~~ 24 months at a pressure designated by the test equipment manufacturer. The method shall be capable of detecting a minimum release equivalent to 0.1 ~~gallon~~ gallons per hour defined at 40 ~~psi~~ pounds per square inch. If the piping cannot be isolated from the tank for testing purposes, the piping shall be tested using an overfilled volumetric tank integrity test or other test method meeting the requirements of section 2643(f) if approved by the local agency.
- (f) Each quantitative release detection method, with the exception of manual inventory reconciliation and manual tank gauging, shall be certified to comply with the performance standard(s) specified in this section and shall be subject to limitations specified in the certification. This certification shall be obtained by the equipment manufacturer following one of the evaluation procedures in paragraphs (1) through (3) below:
- (1) An independent third party testing laboratory shall evaluate and approve the method using the appropriate "EPA Standard Test Procedure" for leak detection equipment in Appendix IV; ~~or,~~
 - (2) An independent third party testing laboratory shall evaluate and approve the method using a voluntary consensus standard that is intended for the method being evaluated; ~~or,~~
 - (3) An independent third party testing laboratory shall evaluate and approve the method using a procedure deemed equivalent to an EPA procedure. Any resultant certification shall include a statement by the association or laboratory that the conditions under which the test was conducted were at least as rigorous as those used in the EPA standard test procedure. This certification shall include statements that:
 - (A) The method was tested under various conditions that simulate interferences likely to be encountered in actual field conditions (no fewer nor less rigorous than the environmental conditions used in the corresponding EPA test procedure);
 - (B) Each condition under which the method was tested was varied over a range expected to be encountered in 75 percent of the normal test cases;
 - (C) All portions of the equipment or method evaluated received the same evaluation;

- (D) The amount of data collected and the statistical analysis are at least as extensive and rigorous as the data collected and statistical analysis used in the corresponding EPA test procedure and are sufficient to draw reasonable conclusions about the equipment or method being evaluated;
 - (E) The full-sized version of the leak detection equipment was physically tested; and
 - (F) The experimental conditions under which the evaluation was performed and the conditions under which the method was recommended for use have been fully disclosed and that the evaluation was not based solely on theory or calculation; ~~or-~~
- (4) The evaluation results referred to paragraphs (2) and (3) shall contain the same information and shall be reported following the same general format as the EPA standard results sheet as any corresponding EPA test procedure.
- (g) The underground storage tank owner or operator shall notify the local agency 48 hours before conducting a tank or piping integrity test ~~unless the notification requirement is waived by the local agency~~. Within 30 ~~calendar~~ days of completion of an underground storage tank or piping integrity test, the tank owner or operator shall submit a report to the local agency through the California Environmental Reporting System or a local reporting portal. The results of any underground storage tank tests, other than those required by this article, performed on the underground storage tank or piping to detect an unauthorized release shall be submitted by the owner or operator to the local agency through the California Environmental Reporting System or a local reporting portal within 30 ~~calendar~~ days of completion of the test. The report shall be presented in written ~~and/or tabular~~ format, as appropriate, and shall be at a level of detail appropriate for the release detection method used.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25292 and 25404, Health and Safety Code; and 40 CFR §§ 280.40, 280.41, 280.42, 280.43, 280.44 and 280.45.

§ 2644. Non-Visual Monitoring/Qualitative Release Detection Methods.

- (a) An owner or operator who is required, pursuant to section 2641, to establish a non-visual monitoring program, shall comply with the requirements of this section if a qualitative release detection method is used. Each qualitative release detection method, including interstitial monitors, shall have an independent ~~third-party~~ third party evaluation to certify accuracy and response time of the detection method in accordance with procedures in Appendix IV. Examples of qualitative release detection methods that may be used are in Appendix III.
- (b) If vadose zone monitoring is used as a release detection method, it shall be conducted in accordance with section 2647.
- (c) If ground water monitoring is used as a release detection method, it shall be conducted in accordance with section 2648.
- (d) A qualitative release detection method which includes the installation of monitoring wells or drilling other borings shall comply with installation, construction, and sampling and analysis procedures in section 2649.

- (e) Underground pressurized piping that is monitored at least ~~monthly once every 30 days~~ by a non-visual qualitative release detection method satisfies the ~~annual~~ tightness test requirement of section 25292(e) of the Health and Safety Code.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25292, Health and Safety Code; ~~and~~ 40 CFR ~~280.41~~, 280.43 ~~and 280.44~~.

§ 2644.1. Enhanced Leak Detection.

- (a) An owner or operator who is required, pursuant to section 2640(e), to implement a program of enhanced leak detection or monitoring shall comply with ~~the requirements of this section as follows~~ all of the following:

- (1) Enhanced leak detection means a test method that ascertains the integrity of an underground tank system by introduction, and external detection, of a substance that is not a component of the fuel formulation that is stored in the tank system.
- (2) The enhanced leak detection test method shall be third party certified, in accordance with section 2643(f), for the capability of detecting both vapor and liquid phase releases from the underground storage tank system. The enhanced leak detection test method shall be capable of detecting a leak rate of at least 0.005 ~~gph gallons per hour~~, with a probability of detection of at least 95% percent and a probability of false alarm no greater than ~~5%~~ five percent.
- (3) Owners and operators subject to the requirements of this section shall have a program of enhanced leak detection reviewed and approved by the local agency within ~~6~~ six months following notification by the board. The enhanced leak detection shall be implemented no later than 18 months following receipt of notification from the board and repeated every 36 months thereafter.
- (4) Owners and operators of underground storage tanks subject to the requirements of this section must notify the local agency at least 48 hours prior to conducting the enhanced leak detection test ~~unless this notification requirement is waived by the local agency~~.
- (5) Owners and operators of underground storage tanks subject to the requirements of this section shall submit a copy of the enhanced leak detection test report to the board and the local agency within 60 days of completion of the test.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25283, 25291, 25292, 25292.4 and 25404, Health and Safety Code; and 40 CFR §§ 280.40 and 280.41.

~~§ 2645. Manual Tank Gauging and Testing for Small Tanks.~~

- ~~(a) Manual tank gauging may be used as part of a non-visual monitoring program for existing underground storage tanks which have a total system capacity of 2,000 gallons or less and which can be taken out of service for at least 48 or 72 continuous hours each week as indicated in Table 4.1.~~

- ~~(b) Manual tank gauging shall be conducted weekly in accordance with subsection (d). Piping testing shall be conducted in accordance with section 2643(c), (d), or (e). Tanks with a capacity of 1,001 to and including 2,000 gallons shall also receive a tank integrity test each year. Tanks with a capacity of 551 to and including 1,000 gallons shall also have an annual tank integrity test unless the gauging period is 60 hours or more. Requirements of section 2643(b) do not apply to tanks which are monitored in accordance with this section.~~
- ~~(c) Manual tank gauging shall not be used on tanks with secondary containment and shall not be used as a leak detection method after December 22, 1998, for underground storage tanks with a capacity greater than 1,000 gallons.~~
- ~~(d) Owners or operators of existing underground storage tanks who use manual tank gauging as part of a non-visual monitoring program shall conduct weekly gauging according to the following specifications:~~
- ~~(1) Tank liquid level measurements shall be taken at the beginning and end of a gauging period which shall be at least 36 or 60 continuous hours as set forth in Table 4.1 during which no liquid is added to or removed from the tank. The underground storage tank shall be secured to prevent inputs or withdrawals during the gauging period. No product shall be added to the tank within the 12-hour period preceeding the gauging period. The liquid level measurements shall be based on an average of two consecutive stick readings at both the beginning and end of the gauging period; and,~~
 - ~~(2) The equipment used shall be capable of measuring the level of the product over the full range of the tank's height to the nearest one-eighth of an inch; and,~~
 - ~~(3) If the variation between beginning and ending measurements exceeds the weekly or monthly standards set forth in Table 4.1, a second 36-hour or 60-hour test shall begin immediately and all measurements and calculations checked for possible errors. If the second test confirms a variation which exceeds the weekly or monthly standards in Table 4.1, a tank integrity test shall be conducted within 72 hours of completion of the second test. The local agency may extend this 72-hour period up to 30 calendar days, if all contents of the underground storage tank are safely and properly removed within the 72-hour period.~~
- ~~(e) If the results of a tank integrity test confirm an unauthorized release, the owner or operator shall comply with the release reporting requirements of Article 5 and shall replace, repair, upgrade, or close the underground storage tank in accordance with the applicable provisions of this chapter.~~

Table 4.1
Manual Tank Gauging Measurement Standards

Tank Size (in Gallons)	Weekly Standard One-Test (Gallons)	Monthly Standard Average of 4 tests (Gallons)	Testing Period [FNa1] (hours)	Total Time Out-of-Service (hours)
550 or less	10	5	36	48
551 to and including 1,000	12	6	60	72

[FNaa1] 551 to and including 1,000	43	7	36	48
[FNaa1] 1,001 to and including 2,000	26	13	60	72

~~[FNa1]~~

~~The tank must be taken out of service at least 12 hours before the test (gauging) period begins.~~

~~[FNaa1]~~

~~An annual tank integrity test is required.~~

~~Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.~~

~~Reference: Sections 25292 and 25293, Health and Safety Code; 40 CFR 280.43.~~

~~§ 2646. Manual Inventory Reconciliation.~~

~~(a) Manual inventory reconciliation may be used as part of a non-visual monitoring program set forth in section 2643(b)(4) for existing underground storage tanks which contain motor vehicle fuels.~~

~~(b) After January 1, 1993, manual inventory reconciliation shall not be used to comply with the requirements of this article where the existing ground water level or the highest anticipated ground water level is less than 20 feet below the bottom of the tank. The ground water level shall be determined in accordance with the requirements of section 2649(c). After December 22, 1998, manual inventory reconciliation shall not be used to satisfy underground storage tank monitoring requirements.~~

~~(c) Each underground storage tank shall be individually monitored using a method that incorporates the following procedures:~~

~~(1) Separate daily measurements shall be taken and recorded for both the motor vehicle fuel and any water layer. For the purpose of this section, "daily" means at least every day that motor vehicle fuel is added to or withdrawn from the tank, but no less than five days per week. The number of days may be reduced by the number of public holidays that occur during the week if there is no input to or withdrawal from the tank on the holiday. Local agencies may reduce the frequency of monitoring to not less than once every three days at facilities that are not staffed on a regular basis provided that the monitoring is performed every day the facility is staffed. Measurements shall be:~~

~~(A) taken when no substance is being added to or withdrawn from the tank;~~

~~(B) performed by the owner, operator, or other designated persons who have had appropriate training;~~

~~(C) based on the average of two readings if dipstick or tape measurements are used.~~

~~(D) determined by equipment capable of measuring the level of the product over the full range of the tank's height to the nearest one-eighth of an inch. If a dipstick is used to~~

~~determine the product level, a substance capable of rendering the readings legible shall be applied to the dipstick before use, if necessary to obtain accurate readings;~~

~~(E) determined by equipment capable of measuring, to the nearest one-eighth of an inch, water present in the bottom of the tank. If a dipstick is used, water-finding paste shall be applied to the dipstick. If the tank is not level, and the measurements are taken manually, the measurements shall be taken at the lowest end of the tank.~~

~~(F) measured at the center of the longitudinal axis of the tank if access is available or measured at the lowest end of the tank with a calibration measurement at both ends, if possible, to determine if any tank tilt exists, and, if so, its magnitude; and~~

~~(G) converted to volume measurements based on a calibration chart for the tank. This chart shall, where feasible, take into account the actual tilt of the tank.~~

~~(2) Daily readings shall be taken for input and withdrawals. The amount of product inputs indicated by delivery receipt shall be compared with measurement of the tank inventory volume before and after delivery. Product input shall be determined by a method that introduces the least amount of error in the monthly inventory reconciliation calculations. Underground storage tanks that are connected by a manifold may require time for the level to stabilize before a measurement is taken. Product shall be delivered to the tank through a drop tube that extends to within 12 inches of the bottom of the tank.~~

~~(d) The daily variation shall be the difference between the physically measured inventory in storage and the calculated inventory in storage. The physically measured inventory shall be measured daily by taking a liquid level measurement and converting it to gallons using a calibration chart. The calculated inventory shall be determined daily by adding the amount of product added to the tank and subtracting the withdrawals from the inventory measured on the previous day. These variations shall be algebraically summed for a period of one month. If the absolute value of the monthly variations exceeds a variation of 1.0 percent of the total monthly input to or withdrawals from the tank plus 130 gallons, the variation shall be investigated in accordance with subsection (e).~~

~~(e) If the monthly manual inventory reconciliation exceeds the allowable variation, the owner or operator shall:~~

~~(1) within 24 hours of completing inventory reconciliation which exceeds the allowable variation, notify the local agency of the suspected unauthorized release;~~

~~(2) within 24 hours of discovering a variation which exceeds the allowable variation, review the inventory records for the preceding 30 days to determine if an error in calculations was made. If investigation shows that an error in calculations was made and that variations have not been exceeded, no further steps need to be taken;~~

~~(3) within 24 hours of discovering a variation which exceeds an allowable variation, have all readily accessible facilities carefully inspected for leakage by appropriately trained persons. If an unauthorized release is detected, the owner or operator shall comply with the requirements of Article 5. If no unauthorized release is detected, the owner or operator shall continue with the following steps:~~

~~(4) have dispenser meters, which determine the amount of product withdrawn from the tank, checked and recalibration, if necessary, within 24 hours of completing the procedure required in subdivision (3) above. Dispenser meters shall comply with California Code of Regulations, Title 4, Division 9, "Division of Measurement Standards, Department of Food and Agriculture." Meters shall be inspected by the County Department of Weights and Measures or a device repairman as defined in the California Business and Professions Code, Division 5, Chapter 5.5. This subdivision applies to all meters used for determining withdrawals, including those at non-retail facilities;~~

~~(5) continue to conduct inventory reconciliation according to the requirements of this section. If a second 30-day period of data confirms the initial results, the owner or operator shall comply with the requirements of Article 5; and~~

~~(6) conduct additional tests or investigations as required by the local agency and, if applicable, replace, repair, upgrade, or close the tank in accordance with the applicable provisions of this chapter.~~

~~(f) Whenever any of the steps in subsection (e) of this section are performed, the results shall be documented in the monitoring record required under section 2712. If completion of any of the steps in subsection (e) indicates that the apparent excessive variation is not due to a release or tank failure, the remainder of the steps need not be completed.~~

~~(g) On an annual basis, the owner or operator shall submit a written statement to the local agency verifying under penalty of perjury that all monthly reports were summarized and that all data are within allowable variations. If data exceeded allowable variations, the owner or operator shall provide the local agency with a list of times, dates, and corresponding variations which exceeded allowable variations, this information shall be signed by the owner or operator under penalty of perjury.~~

~~(h) The transfer of hazardous substances into and out of the underground storage tank may continue while the steps in subsection (e) are being implemented, provided the steps are completed within the specified periods. Daily inventory readings and monthly reconciliation shall continue while the steps are being implemented.~~

~~(i) Dispenser meters which determines the amount of product withdrawn from the tank shall comply with the provisions of Title 4, Division 9, "Division of Measurement Standards; Department of Agriculture." Meters shall be inspected and recalibrated by the County Department of Weights and Measures or a device repairman as defined in Division 5, Chapter 5.5 of the Business and Professions Code.~~

~~Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.~~

~~Reference: Sections 25291 and 25292, Health and Safety Code; 40 CFR 280.43.~~

§ 2646.1. Statistical Inventory Reconciliation.

(a) When approved by the local agency, statistical inventory reconciliation may be used as part of a non-visual monitoring program, set forth in section 2643(b)~~(3)~~(2), for existing underground storage tanks which contain motor vehicle fuel.

(b) Each underground storage tank shall be individually monitored using a method that incorporate the following procedures:prescribed by section 2646(c)-

(1) Separate daily measurements shall be taken and recorded for both the motor vehicle fuel and any water layer. For the purpose of this section, "daily" means at least every day that motor vehicle fuel is added to or withdrawn from the tank, but no less than five days per week. The number of days may be reduced by the number of public holidays that occur during the week if there is no input to or withdrawal from the tank on the holiday. Local agencies may reduce the frequency of monitoring to not less than once every three days at facilities that are not staffed on a regular basis provided that the monitoring is performed every day the facility is staffed. The number of days may be reduced only if consistent with the independent third party certification required by section 2643(f). Measurements shall be:

(A) Taken when no substance is being added to or withdrawn from the tank;

(B) Performed by the owner, operator, or other designated persons who have had appropriate training;

(C) Based on the average of two readings if dipstick or tape measurements are used;

(D) Determined by equipment capable of measuring the level of the product over the full range of the tank's height to the nearest one-eighth of an inch. If a dipstick is used to determine the product level, a substance capable of rendering the readings legible shall be applied to the dipstick before use, if necessary to obtain accurate readings;

(E) Determined by equipment capable of measuring, to the nearest one-eighth of an inch, water present in the bottom of the tank. If a dipstick is used, water-finding paste shall be applied to the dipstick. If the tank is not level, and the measurements are taken manually, the measurements shall be taken at the lowest end of the tank;

(F) Measured at the center of the longitudinal axis of the tank if access is available or measured at the lowest end of the tank with a calibration measurement at both ends, if possible, to determine if any tank tilt exists, and, if so, its magnitude; and

(G) Converted to volume measurements based on a calibration chart for the tank. This chart shall, where feasible, take into account the actual tilt of the tank.

(2) Daily readings shall be taken for input and withdrawals. The amount of product inputs indicated by delivery receipt shall be compared with measurement of the tank inventory volume before and after delivery. Product input shall be determined by a method that introduces the least amount of error in the 30 day inventory reconciliation calculations. Underground storage tanks that are connected by a manifold may require time for the level to stabilize before a measurement is taken. Product shall be delivered to the tank through a drop tube that extends to within 12 inches of the bottom of the tank.

(c) ~~On a monthly basis, the~~ The tank owner or operator must provide the minimum number of data records to the statistical inventory reconciliation provider as required by that provider. ~~The previous month's~~ Previously submitted data may be included with the current ~~month's~~ data to total the minimum number of records necessary to complete the statistical inventory reconciliation. Data submissions to the statistical inventory reconciliation provider and

subsequent receipt of reports from the provider shall be completed ~~monthly within 20 calendar days of the end of the data collection period at least once every 30 days~~. To give the owner or operator an opportunity to become proficient in the use of statistical inventory reconciliation, the requirements in ~~subsection-subdivision~~ (d) ~~below~~ do not apply if any of the first three reports are inconclusive. The owner or operator shall inform the local agency of the results of the first three reports, regardless of the results.

- (d) If the results of a report are inconclusive or indicate a possible unauthorized release, the owner or operator shall, within 24 hours of receipt of the report:
- (1) ~~notify~~ Notify the local agency of the possible unauthorized release, and within 10 ~~calendar~~ days, submit a copy of the report to the local agency. The local agency may allow up to 10 additional ~~calendar~~ days in which to submit the report;
 - (2) ~~inspect~~ Inspect the inventory records for errors to determine if data were collected properly; and
 - (3) ~~have~~ Inspect all accessible portions of the underground storage tank system ~~inspected~~ for leakage by appropriately trained persons.
- (A) If an unauthorized release is detected, the owner or operator shall comply with the requirements of Article 5.
- (B) If no unauthorized release is detected, the owner or operator shall ~~continue with the steps in subdivision (4) below~~:
- ~~(4)~~ have dispenser meters, which determine the amount of product withdrawn from the tank, checked and recalibrated if necessary within 48 hours of receipt of the report. Meters shall be recalibrated by the County Department of Weights and Measures or a device repair person as defined in the California Business and Professions Code, Division 5, Chapter 5.5. This ~~subdivision-subparagraph~~ applies to all meters used for determining withdrawals, including those at non-retail facilities. Dispenser meters shall comply with California Code of Regulations, Title 4, Division 9, "Division of Measurement Standards, Department of Food and Agriculture."
- (e) Daily readings shall continue to be taken and recorded during the investigation specified in ~~subsection-subdivision~~ (d) above. If the second statistical inventory reconciliation report does not indicate a tight system, the owner or operator shall comply with the release reporting requirements of Article 5.
- (f) The owner or operator who reports a suspected release in accordance with ~~subsection~~ subdivision (e) above, shall conduct additional tests or investigations as required by the local agency and, if necessary, replace, repair, upgrade, or close the tank in accordance with the applicable provisions of this chapter.
- (g) A tank integrity test meeting the requirements of section 2643.1 is also required at least once every two years 24 months when statistical inventory reconciliation is used. The first tank integrity test shall be conducted within the first ~~year~~ 12 months of implementation of a monitoring program which includes statistical inventory reconciliation.
- (h) The owner or operation shall conduct a piping tightness test and, if necessary, a tank integrity test within 15 ~~calendar~~ days of receipt of two successive reports which are inconclusive or which indicate a possible unauthorized release. The local agency may also

require a piping tightness test and, if necessary, a tank integrity test if frequent inconclusive results are reported.

- (i) Piping connected to a tank which is monitored using statistical inventory reconciliation shall be tested in accordance with section 2643(c), (d), or (e).
- (j) ~~On an annual basis~~ At least once every 12 months, the owner or operator shall submit a written statement to the local agency which indicates the results from the statistical inventory reconciliation reports for the previous 12 months.
- (k) Dispenser meters which determine the amount of product withdrawn from the tank shall comply with the provisions of Title 4, Division 9, "Division of Measurement Standards, Department of Agriculture." Meters shall be inspected and recalibrated by the County Department of Weights and Measures or a device repair person as defined in Division 5, Chapter 5.5 of the Business and Professions Code.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25291 and 25292, Health and Safety Code; and 40 CFR §§ 280.41 and 280.43.

§ 2647. Vadose Zone Monitoring Requirements.

- (a) Owners or operators of existing underground storage tanks who use vadose zone monitoring as part of a non-visual monitoring program shall comply with the requirements of this section. Vapor monitoring, soil-pore liquid monitoring, or a combination of these or other vadose zone monitoring methods may be used.
- (b) Vadose zone monitoring shall not be used as the sole release detection method of non-visual monitoring where the monitoring well cannot be located within the backfill surrounding the tank, or where the existing ground water level or the highest anticipated ground water level, including intermittent perched ground water, is less than ~~ten~~10 feet below the bottom of the tank. Ground water levels shall be determined in accordance with section 2649(c).
- (c) Vadose zone vapor monitoring shall be conducted continuously. Other vadose zone monitoring shall be conducted at least weekly. All manual sampling in the vadose zone shall be conducted in accordance with section 2649(g).
- (d) The number, location, and depths of vadose zone monitoring points shall be selected to achieve the objective specified in section 2641(a). Where possible, monitoring points shall be located within the excavation backfill surrounding the underground storage tank. The owner or operator shall determine the exact location of the underground storage tank and associated piping before attempting to install monitoring wells and/or devices pursuant to local agency approved.
- (e) Vadose zone vapor monitoring shall comply with the following minimum requirements:
 - (1) The vapor characteristics of the stored product, or a tracer compound placed in the underground storage tank system, shall be sufficiently volatile to result in a vapor level that is detectable by the monitoring devices;

- (2) Backfill materials and soils surrounding monitoring points shall be sufficiently porous to readily allow diffusion of vapors;
 - (3) The level of background contamination in the excavation zone and surrounding soils shall not interfere with the method used to detect releases from the underground storage tank;
 - (4) The monitoring devices shall be designed and operated to detect any significant increase in concentration above the background of the hazardous substance stored in the underground storage tank, a component or components of that substance, or a tracer compound placed in the tank system;
 - (5) The location and depth of each monitoring point shall be placed according to the most probable movement of vapor through the backfill or surrounding soil;
 - (6) Vapor monitoring wells located in the backfill shall be constructed so that any unauthorized release that may pond at the horizontal interface between the backfill and natural soils can be detected in the vapor well; and
 - (7) All vapor monitoring wells shall be installed, constructed, and sampled according to the requirements specified in sections 2649(b), (c), (e), and (f).
- (f) Soil-pore liquid monitoring and other forms of vadose zone monitoring shall comply with the following minimum requirements:
- (1) The stored substance shall be susceptible to detection by the proposed release detection method;
 - (2) The stored substance shall not corrode or otherwise attack the materials from which the detection system is constructed or otherwise render the detection system inoperable or inaccurate; and
 - (3) Site-specific conditions (e.g., precipitation, ground water, soil-moisture, background contamination) shall not interfere with the operability and accuracy of the release detection method.
- (g) Compliance with the requirements of ~~subsections-subdivisions~~ (e) and (f) ~~above~~, shall be based on a ~~site-assessment~~ site assessment including assessment of the underground storage tank excavation zone.
- (h) Site assessments conducted on and after the effective date of this subdivision in accordance with subdivision (g) above, shall be signed by a professional engineer, professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25292, Health and Safety Code; and 40 CFR §§ 280.43 and 280.45.

§ 2648. Ground Water Monitoring Requirements.

- (a) Owners or operators of existing underground storage tanks who use ground water monitoring as part of a non-visual monitoring program shall comply with the requirements of this section. Ground water monitoring may be used in combination with other quantitative or qualitative release detection methods or, where permissible under this section, as the sole release detection method.
- (b) Ground water monitoring may be used as the sole release detection method of non-visual monitoring for existing underground tanks only where all of the following conditions exist:
 - (1) The hazardous substance stored is immiscible with water and has a specific gravity of less than one;
 - (2) Continuous monitoring devices or manual methods are used which are capable of detecting the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells. This capability shall be certified by an independent third party using an appropriate evaluation procedure. Examples of acceptable evaluation procedures are in Appendix IV;
 - (3) The existing ground water level or the highest anticipated ground water level, including intermittent perched ground water, is less than 20 feet from the ground surface. These ground water levels shall be determined according to the requirements of section 2649(c);
 - (4) The hydraulic conductivity of the soil(s) between the underground storage tank and the monitoring wells or devices is at least 0.01 ~~cm/sec~~ centimeters per second (e.g., the soil consists of gravels, coarse to medium sands, or other permeable materials);
 - (5) The ground water proposed for monitoring has no present beneficial uses (e.g., domestic, municipal, industrial, or agricultural supply) or is not hydraulically connected to ground or surface water which has actual beneficial uses; and
 - (6) Monitoring wells or devices are located within the excavation zone or as close to the excavation zone as feasible.
- (c) Compliance with the conditions specified in ~~subdivision subsection~~ (b) above, shall be based on a ~~site-assessment~~ site assessment, including assessment of the areas within and immediately below the underground storage tank excavation zone. If ground water monitoring is approved as the sole release detection method of a non-visual monitoring program, the number and location of the monitoring wells and/or devices as approved by the local agency shall also be based on this ~~site-assessment~~ site assessment with minimum requirements as follows:
 - (1) Single tank - two wells, one at each end of the tank.
 - (2) Two or three tanks - three wells equally spaced.
 - (3) Four or more tanks - four wells, at least two of which shall be downgradient and the remainder equally spaced.

(4) Pipelines - additional wells, if needed, as determined by the local agency.

(d) Site assessments conducted on and after the effective date of this subdivision in accordance with subdivision (c) above, shall be signed by a professional engineer, professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline.

~~(d)~~(e) Ground water monitoring shall be conducted at least ~~monthly~~ once every 30 days or continuously. Any continuous monitoring system shall be capable of detecting the presence of hazardous substance on top of the ground water in the monitoring well and shall allow periodic collection of samples. Ground water samples shall be analyzed by visual observation or field or laboratory analysis as approved by the local agency depending on the method of monitoring and the constituents being evaluated. The local agency may require periodic laboratory analysis where visual observation or field analysis does not provide an adequate degree of detection as compared to that of laboratory analysis. Sampling conducted which requires field or laboratory analysis shall comply with the minimum requirements of section 2649(g).

~~(e)~~(f) The number, location, and depths of ground water monitoring wells shall be selected to achieve the objective specified in section 2641(a). Monitoring wells shall be located as close as possible to the underground storage tank or the perimeter of the underground storage tank cluster, subject to the review and approval of the local agency.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25292, Health and Safety Code; and 40 CFR §§ 280.43 and 280.45.

§ 2649. Well Construction and Sampling Requirements.

(a) Owners or operators who use a qualitative release detection method shall comply with the requirements of this section and any applicable requirements of sections 2644, 2647, and 2648.

(b) The installation of all monitoring wells and the drilling of all other borings shall be in accordance with local permitting requirements or, in their absence, with the following requirements:

(1) All monitoring wells and all other borings shall be logged during drilling according to the following requirements:

(A) Soil shall be described in the geologic log according to the Unified Soil Classification System as presented in Geotechnical Branch Training Manual Numbers 4, 5, and 6, published in January of 1986 (available from the Bureau of Reclamation, Engineering and Research Center, Attention: Code D-7923- A, Post Office Box 25007, Denver, Colorado 80225);

(B) Rock shall be described in the geologic log in a manner appropriate for the purpose of the investigation;

- (C) All wet zones above the water table shall be noted and accurately logged. Where possible, the depth and thickness of saturated zones shall be recorded in the geologic log; and
- (D) Geologic logs shall be prepared by a professional geologist or civil engineer, who is registered or certified by the State of California and who is experienced in the use of the Unified Soil Classification System. The geologic logs may also be prepared by a technician trained and experienced in the use of the Unified Soil Classification System who is working under the direct supervision of one of the aforementioned professionals, provided that the professional reviews the logs and assumes responsibility for the accuracy and completeness of the logs.
- (2) All drilling tools shall be thoroughly steam cleaned immediately before each boring is started;
- (3) All well casings, casing fittings, screens, and all other components that are installed in a well shall be thoroughly cleaned before installation;
- (4) Soil and water sampling equipment and materials used to construct a monitoring well shall be compatible with the stored hazardous substance and shall not donate, capture, mask, or alter the constituents for which analyses will be made. All perforated casings used in the construction of monitoring wells shall be factory perforated;
- (5) Drilling fluid additives shall be limited to inorganic, non-hazardous materials which conform to the requirements of subsection (b)(4). All additives used shall be accurately recorded in the boring log;
- (6) Representative samples of additives, cement, bentonite, and filter media shall be retained for 90 ~~calendar~~ days for possible analysis for contaminating or interfering constituents;
- (7) If evidence of contamination is detected by sight, smell, or field analytical methods, drilling shall be halted until a responsible professional determines if further drilling is advisable;
- (8) All borings which are converted to vadose zone monitoring wells shall have the portion of the boring which is below the monitored interval sealed with approved grout;
- (9) All borings which are not used for ground water or vadose zone monitoring shall be sealed from the ground surface to the bottom of the boring with an approved grout. All slurry-type grouts used to seal an abandoned boring or an abandoned well shall be emplaced by the tremie method; and
- (10) All monitoring wells shall be clearly marked and secured to avoid unauthorized access and tampering. Surface seals may be required by the local agency.
- (c) When installing a vadose zone or ground water monitoring well, the highest anticipated ground water level and existing ground water level shall be determined. Highest anticipated ground water levels shall be determined by reviewing all available water level records for wells within one mile of the site. Existing site ground water levels shall be established either by reviewing all available water level measurements taken within the last ~~two years~~

24 months at all existing wells, within 500 feet of the underground storage tank which are perforated in the zone of interest, or by drilling at least one exploratory boring constructed as follows:

- (1) The exploratory boring shall be drilled down gradient, if possible, and as near as possible to the underground storage tank within the boundaries of the property encompassing the facility, but no further than ~~ten~~10 feet from the underground storage tank;
 - (2) The exploratory boring may be of any diameter capable of allowing the detection of first ground water;
 - (3) The exploratory boring shall be drilled to first perennial ground water, or to a minimum depth of 20 feet for vadose zone monitoring wells, or to a minimum depth of 30 feet for ground water monitoring wells if permitted by site lithology;
 - (4) If ground water is encountered, and ground water monitoring is the monitoring method, the boring shall be converted to a ground water monitoring well consistent with the provisions of this section; and
 - (5) If ground water is encountered, but ground water monitoring is not the monitoring method, or if the exploratory boring does not encounter ground water, the boring shall be sealed in accordance with the provisions of subsection (b)(9).
- (d) In addition to the requirements of subsection (b), all ground water monitoring wells shall be designed and constructed according to the following minimum requirements:
- (1) Ground water monitoring wells shall extend at least 20 feet below the lowest anticipated ground water level and at least 15 feet below the bottom level of the underground storage tank. However, wells shall not extend through laterally extensive impermeable zones that are below the water table and that are at least five feet thick. In these situations, the well shall be terminated one to two feet into the impermeable zone;
 - (2) Ground water monitoring wells shall be designed and constructed as filter packed wells that will prevent the migration of the natural soil into the well and with factory perforated casing that is sized to prevent migration of filter material into the well;
 - (3) Ground water monitoring well casings shall extend to the bottom of the boring and shall be factory perforated from a point of one foot above the bottom of the casing to an elevation which is either five feet above the highest anticipated ground water level or to within three feet of the bottom of the surface seal or to the ground surface, whichever is the lowest elevation;
 - (4) All well casings shall have a bottom cap or plug;
 - (5) Filter packs shall extend at least two feet above the top of the perforated zone except where the top two feet of the filter pack would provide cross-connection between otherwise isolated zones or where the ground surface is less than ~~ten~~10 feet above the highest anticipated ground water level, the local agency may reduce the height of the filter pack so long as the filter pack extends at least to the top of the perforated zone. Under such circumstances, additional precautions shall be taken to prevent plugging of the upper portion of the filter pack by the overlying sealing material;

- (6) Ground water monitoring wells shall be constructed with casings having a minimum inside diameter of two inches and shall be installed in a boring whose diameter is at least four inches greater than the outside diameter of the casing;
 - (7) Ground water monitoring wells shall be sealed in accordance with local permitting requirements or, in their absence, with the Department of Water Resources Standards for Well Construction (Reference Bulletins 74-81 and 74-90 on Water Well Standards are available from the Department of Water Resources, Sacramento);
 - (8) Seventy-two or more hours following well construction, all ground water monitoring wells shall be adequately developed and equilibrium shall be established prior to any water sampling;
 - (9) ~~Well heads~~ Wellheads shall be provided with a water-tight cap and shall be enclosed in a surface security structure that protects the well from surface water entry, accidental damage, unauthorized access, and vandalism. Traffic lids shall be clearly marked as monitoring wells; and
 - (10) Pertinent well information including well identification, well type, well depth, well casing diameters (if more than one size is used), and perforated intervals shall be permanently affixed to the interior of the surface security structure and the well identification number and well type shall be affixed on the exterior of the surface security structure.
- (e) In addition to the requirements of subsection (b), all vadose zone vapor monitoring wells shall be cased and sealed as follows:
- (1) Well casings for vapor monitoring shall be fully perforated except for the portion adjacent to a surface seal and that portion used as a free liquid trap;
 - (2) Surface seals for vapor wells that are completed no more than five feet below the bottom of the underground storage tank and which are above any free water zones may be required at the discretion of the local agency on a site-specific basis;
 - (3) If surface seals for vapor wells are completed in or below a potential free water zone, the seal shall not extend below the top of the underground storage tank; and
 - (4) Vapor wells need not be sealed against infiltration of surface water if constructed wholly within backfill that surrounds the underground storage tank and which extends to the ground surface.
- (f) Undisturbed (intact) soil samples shall be obtained from all borings for the installation of monitoring wells and all other borings and analyzed according to the following minimum requirements, unless the local agency waives this requirement under this subsection:
- (1) Borings shall be drilled and sampled using accepted techniques which do not introduce liquids into the boring and which will allow the accurate detection of perched and saturated zone ground water. If this cannot be accomplished using acceptable techniques, the requirement for soil sampling may be waived by the local agency provided, however, that installation of the vadose zone or ground water monitoring system shall be completed; and provided further, that once below the water table,

borings need not be advanced using the same method that was used in the vadose zone;

- (2) Soil samples shall be obtained at intervals of five feet or less and at any significant change in lithology, beginning at the ground surface. Sampling is not required in unweathered bedrock which has little ~~or~~ no permeability;
 - (3) A soil sample shall be obtained at the termination depth of a dry boring regardless of the spacing interval;
 - (4) Soil samples shall be of sufficient volume to perform the designated analyses including soil vapor and soil extract analyses and to provide any specified replicate analyses;
 - (5) Soil samples shall be acquired, prepared, preserved, stored, and transported by methods that are appropriate for the objectives of the investigation which safeguard sample integrity and satisfy the requirements of subsection (g);
 - (6) Samples shall be analyzed in a State-certified laboratory by methods that provide quantitative or qualitative results. Lower detection limits shall be verified by the laboratory;
 - (7) Samples shall be analyzed for one or more of the most persistent constituents that have been stored in the underground storage tank. If the use of the underground storage tank has historically changed, samples shall be analyzed for at least one constituent from each period of use. If the hazardous substance is known to degrade or transform to other constituents in the soil environment, the analysis shall include these degradation and/or transformation constituents;
 - (8) If hazardous substances known or suspected to have been contained in the underground storage tank are detected at concentrations in excess of background concentrations (background concentrations shall be applicable only if the constituent occurs naturally at the site), further soil analysis is not necessary pursuant to this subsection. The hazardous substance(s) shall be assumed to have originated from the underground storage tank. In this situation, the remainder of the soil samples need not be analyzed pursuant to these regulations and the owner or operator shall comply with subdivision (9) below. A permit shall not be granted unless further detailed investigation clearly establishes that the underground storage tank is not the source of the hazardous substance or that it has been properly repaired since the unauthorized release and that any subsequent unauthorized release from the underground storage tank can be detected despite the presence of the hazardous substance already in the environment; and
 - (9) If soil analysis indicates that an unauthorized release has occurred, the owner or operator shall comply with the release reporting requirements of Article 5 and shall replace, repair, upgrade, or close the underground storage tank pursuant to the applicable provisions of this chapter.
- (g) The qualitative release detection method shall include consistent sampling and analytical procedures, approved by the local agency, that are designed to ensure that monitoring results provide a reliable indication of the quality of the medium (e.g., ground water, soil-pore liquid, soil vapor, or soil) being monitored. Some acceptable procedures are listed as

references in Appendix I, Table C. The owner or operator shall provide a written detailed description, to be specified in the permit and to be maintained as part of the records required under section 2712 of Article 10, of the procedures and techniques for:

- (1) Sample collection (e.g., purging techniques, water level, sampling equipment, and decontamination of sampling equipment);
- (2) Sample preservation and shipment;
- (3) Analytical procedures; and
- (4) Chain-of-custody control.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.
Reference: Section 25292, Health and Safety Code; and 40 CFR § 280.43.

Article 6. Underground Storage Tank Repair and Upgrade Requirements

§ 2660. General Applicability of Article.

- (a) This article describes the requirements for repairing or upgrading underground storage tank systems. Upgrades and repairs shall be properly conducted in accordance with this article and any additional manufacturer's specifications.
- (b) Section 2661 describes the requirements for repairing underground storage tanks, piping, or other underground storage tank system components that have caused an unauthorized release as defined in sections 25294 and 25295 of the Health and Safety Code.
- (c) Section 2662(b) describes upgrade requirements for underground storage tanks containing hazardous substances other than motor vehicle fuel. Sections 2662(c); and (d) describe upgrade requirements for all underground storage tanks containing motor vehicle fuel. Underground storage tanks which contain motor vehicle fuel and which are constructed of fiberglass, other non-corrosive materials, steel clad with fiberglass, or steel clad with other noncorrosive materials, are not required to comply with the requirements of section 2662(c), but are required to meet the requirements of section 2662(d).
- (d) Section 2663 describes the requirements for upgrading or repairing tanks using interior lining.
- (e) Section 2664 describes the requirements for upgrading tanks using bladder systems.
- (f) Section 2665 describes the upgrade requirements for spill containers and overfill prevention equipment.
- (g) Section 2666 describes the upgrade requirements for underground piping.
- (h) Owners or operators shall meet the upgrade ~~Upgrade~~ requirements for underground storage tanks, spill containers, and overfill prevention equipment, and underground piping, and shall be completed no later than December 22, 1998. ~~Requirements for~~ under-dispenser

containment, or under-dispenser spill control or containment systems, ~~shall be completed no later than December 31, 2003 as applicable.~~

- (i) As a preventive measure, an owner or operator may upgrade any underground storage tank constructed of any material which is not under pressure and which contains motor vehicle fuel as specified in sections 2662(a), (c), and (e). Before upgrading in accordance with this ~~subdivision subsection~~, the owner or operator shall prove to the satisfaction of the local agency that the underground storage tank system has not caused an unauthorized release. If soil samples are taken, the owner or operator shall notify the local agency in advance of taking the samples.
- (j) Owners or operators shall maintain records of repairs, linings, and upgrades that demonstrate compliance with the requirements of this article for the remaining operating life of the tank.
- (k) Local agencies shall not approve a repair or upgrade unless it can be demonstrated that the underground storage tank system is structurally sound and the method of repair or upgrade will prevent unauthorized releases due to structural failure or corrosion during the operating life of the underground storage tank system.
- (l) The materials used in the repair or upgrading process shall be applied in accordance with nationally recognized engineering practices.
- (m) Materials used in repairs and upgrades shall be compatible with the ~~existing~~-underground storage tank system ~~existing~~ materials and shall not be subject to deterioration due to contact with the hazardous substances being stored.
- (n) Steel underground storage tanks that exhibit corrosion during the course of repair or upgrade shall comply with the cathodic protection requirements of section 2635(a)(2).

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25284.1, 25292, 25292.1 and 25296, Health and Safety Code; ~~and~~ 40 CFR §§ 280.11, 280.12, ~~280.20, 280.21, 280.33 and 281.32(e).~~

§ 2661. Requirements for Repairing Underground Storage Tank.

- (a) Before repairing an underground storage tank system, the owner or operator shall comply with applicable requirements of Article 5.
- (b) Before repairing an underground storage tank system, the owner or operator shall demonstrate to the satisfaction of the local agency that the conditions and requirements specified in ~~subsection section~~ 2660(k) will be met. When selecting a method of repair, the owner or operator shall take into consideration whether the cause of failure is isolated to the actual failure, is affecting other areas of the underground storage tank, or if any other cause of failure is affecting the primary container.
- (c) A tank may be repaired once using the interior lining method specified in section 2663. A previously lined tank may not be repaired using the interior lining method.

- (d) Holes in steel tanks shall be plugged using self-tapping bolts, boiler plugs, water-tight hydraulic cement, or by welding. In addition, holes in steel and fiberglass tanks shall be repaired as follows:
- (1) Repair areas shall be covered with epoxy or isophthalic polyester based resin. The resin shall be compatible with the intended use of the tank.
 - (2) Fiberglass cloth with a minimum weight of 1.5-~~oz/yd~~ ounces per yard that is silane-treated shall be worked completely into the resin base. The resin base shall be installed a minimum of two inches beyond the fiberglass cloth.
 - (3) All repairs shall include installation of fiberglass cloth with a minimum dimension of 12 x 12 inches centered over the area to be repaired. Larger repairs shall require the cloth to be large enough to provide cloth coverage of at least five inches of cloth bonded to the tank wall, measured from the outermost edge of the repair to the cloth's edge.
 - (4) A second layer of fiberglass cloth of the same weight as specified in ~~subsection~~ subdivision (d)(2) above, shall be installed directly over the primary cloth layer and shall be cut to overlap the primary patch by 1.5 inches on all sides.
 - (5) The repair shall be allowed sufficient cure time, as determined by the resin manufacturer, to provide an acceptable base for tank lining installation.
- (e) Metal piping, pipe fittings, or tank fittings that have released product as a result of corrosion or other damage shall be replaced. Non-metal piping, pipe fittings, or tank fittings shall be repaired or replaced in accordance with manufacturer specifications.
- (f) Tanks and piping which have been repaired shall be tested for tightness within 30 ~~calendar~~ days following the date of completion of the repair. Tanks shall be tested in accordance with section 2643.1. Piping shall be tested in accordance with existing section 2636(f)(3) or 2643(c)(3), as applicable. Tanks or piping that fail this test shall be repaired in accordance with this section or closed in accordance with Article 7.
- (g) A vapor or ground water monitoring system shall be installed to continuously monitor a tank repaired by lining for future unauthorized releases, in accordance with section 2647 or 2648, if no secondary containment system exists.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections s 25292.1 and 25296, Health and Safety Code; and 40 CFR § 280.33.

§ 2663. Interior Tank Lining Requirements.

- (a) Tank lining may be used to satisfy part of the upgrade requirements of section 2662 or to repair a tank pursuant to section 2661. However, a tank that has been repaired using the interior lining method may not be repaired a second time with the interior lining method. The evaluations described in subsections (b) and (c) of this section shall be completed before the lining of a primary container may be authorized by the local agency. The local agency shall deny the proposed lining if the owner fails to demonstrate that the lined primary container will provide continued containment based on the evaluations described in subsections (b) and (c).

(b) Appropriate tests shall be conducted by a special inspector who shall certify that the shell will provide structural support if the tank is lined. A copy of this certification shall be provided by the owner to the local agency. The special inspector shall make this certification by entering and inspecting the entire interior surface of the tank and shall base this certification upon of the following sets of procedures ~~an~~ and criteria:

(1) If a tank is made of non-corrodible material, the following shall be performed:

- (A) The tank shall be cleaned so that no residue remains on the tank wall surface;
- (B) The special inspector shall take interior diameter measurements and, if the cross-section of the tank has compressed more than one percent of the original diameter, the tank shall neither be certified nor returned to service unless the tank is excavated and repaired to correct the compression;
- (C) The special inspector shall conduct an interior inspection to identify any area where compression or tension cracking is occurring and shall determine whether additional fiberglass reinforcing is required for certification before the tank may be lined; and
- (D) If the special inspector does not certify the tank as suitable for lining because it failed a test conducted in accordance with subdivisions (1)(A) through (C) of this subsection, the tank shall be closed in accordance with Article 7.

(2) If the tank is constructed of steel or steel clad with a non-corrodible material, the following shall be performed:

- (A) The tank interior surface shall be abrasive-blasted completely free of scale, rust, and foreign matter; and₇
- (B) The entire tank interior shall be tested using a thickness gauge on a one-foot grid pattern with wall thicknesses recorded on a form that identifies the location of each reading. The tank shall be closed in accordance with Article 7 if the tank's average metal thickness is less than 75 percent of the original wall thickness or if the tank has any of the following defects:

~~1-(i)~~ An open seam or a split longer than three inches;₁

~~2-(ii)~~ A perforation larger than one and one half inches in diameter except directly below a gauging opening at the bottom of a tank where the perforation shall be no longer than two and one half inches in diameter;₁

~~3-(iii)~~ Five or more perforations in any one square-foot area; or

~~4-(iv)~~ Multiple perforations of which any single perforation is larger than one half inch in diameter.

(3) A test approved by the State Water Board as comparable to the tests specified in subsections (b)(1) or (2) above.

- (c) The owner or operator shall demonstrate to the satisfaction of the local agency, based on the tests conducted in accordance with subsection (b) above, that a serious corrosion or structural problem does not exist. If the local agency or special inspector determines that a serious corrosion or structural problem exists, interior lining may be performed only if it can be demonstrated to the satisfaction of the local agency that new or additional corrosion protection will significantly minimize the corrosion and that the existing corrosion problem does not threaten the structural integrity or containment ability of the underground storage tank.
- (d) Before lining a tank, thin areas or other flaws in the tank walls which need additional reinforcing shall be reinforced in accordance with section 2661(d).
- (e) On and after August 9, 1992, the lining material and lining process shall be listed or certified by an independent testing organization based on voluntary consensus standards.
- (f) Before being returned to service, any tank which has been lined shall be internally inspected by a coatings expert or special inspector for conformance with the standards under which the tank was lined. This inspection shall be conducted in accordance with section 2663(h) except for subdivisions (h)(3) and (h)(5).
- (g) Following the lining process and before it is returned to service, the tank shall be given a tank integrity test.
- (h) If a steel tank is lined for the purpose of satisfying the requirements of section 2662(c), or if any tank is repaired using the interior lining method, it shall be inspected by a coatings expert or special inspector within ~~ten years~~ 120 months of lining and every ~~five years~~ 60 months thereafter. Written certification of the inspection shall be provided by the tank owner and the party performing the inspection to the local agency within 30 ~~calendar~~ days of completion of the inspection. The inspection shall include all of the following:
 - (1) Determining that the tank has been cleaned so that no residue remains on the tank walls.
 - (2) Determining that the tank has been vacuum tested at a vacuum of 5.3 inches of Hg for no less than one minute. This vacuum test is not required if the tank is constructed of fiberglass and is submerged in groundwater by more than 50% percent of its depth.
 - (3) If the tank is constructed of fiberglass, taking interior diameter measurements to verify whether the cross-section has compressed by more than one percent of the original diameter.
 - (4) Visually checking the tank interior and lining for discontinuity, compression, tension cracking, and corrosion.
 - (5) For steel tanks, testing the entire tank interior using a thickness gauge on a one-foot grid pattern with metal wall thickness recorded on a form that identifies the location of each reading in order to verify that average metal thickness is greater than 75 percent of the original wall thickness.

- (6) Testing for thickness and hardness of the lining in accordance with nationally recognized industry codes to verify that the lining meets the standards under which the lining was applied.
- (7) For steel tanks, testing the lining using an electrical resistance holiday detector in accordance with nationally-recognized industry codes. The owner or operator shall have all holidays repaired and checked in accordance with nationally recognized industry codes.
- (8) Certification from the special inspector or coatings expert that:
 - (A) ~~The the~~ tank is suitable for continued use for a minimum of ~~five years~~ 60 months.
 - (B) ~~The the~~ tank is suitable for continued use for a minimum of ~~five years~~ 60 months only if it is relined or other improvements are made.
 - (C) ~~The the~~ tank is no longer suitable for continued use and shall be closed in accordance with Article 7.
- (9) A lined tank shall be closed in accordance with Article 7 at the end of its operational life.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25292, 25292.1 and 25296, Health and Safety Code; and 40 CFR §§ 280.21 and 280.33.

§ 2665. Spill Container and Overfill Prevention Equipment Upgrade Requirements.

- (a) By December 22, 1998, all underground storage tank systems shall be retrofitted with an overfill prevention ~~system equipment~~ and a spill container which meet the requirements of ~~section sections~~ 2635(b) and (c)(1). The local agency may waive the requirements for overfill prevention equipment if the conditions specified in section 2635 ~~(b)(3)(c)(2)~~ are met.
- (b) On and after the effective date of this subdivision, all overfill prevention equipment and spill containers shall meet the requirements of Article 3.
- (c) All overfill prevention equipment which use flow restrictors on vent piping which require repair or replacement on or after the effective date of this subdivision, shall be retrofitted with overfill prevention equipment in accordance with sections 2635(c) and (d).

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25292 and 25292.1, Health and Safety Code; and 40 CFR §§ 280.20 and 280.21.

§ 2666. Requirements for Upgrading Underground Piping.

- (a) By December 22, 1998, all underground piping containing hazardous substances other than motor vehicle fuel shall be retrofitted with secondary containment meeting the requirements of section 2636.
- (b) ~~By December 22, 1998, all~~ All underground piping containing motor vehicle fuel and connected to an existing tank shall meet all of the following:

(1) By December 22, 1998, be retrofitted with secondary containment unless the owner or operator demonstrates to the local agency that the piping is constructed of fiberglass reinforced plastic, cathodically protected steel, or other materials compatible with stored products and resistant to corrosion. The secondary containment system shall meet the construction, installation, and monitoring requirements of section 2636.

(2) All buried single-walled piping, except for vent piping, vapor recovery piping, tank riser piping, and suction piping meeting the requirements of section 2636(a)(3), shall meet Article 3 when repaired or replaced on or after the effective date of this subdivision.

(c) By December 22, 1998, all automatic line leak detectors for underground pressurized piping which is not secondarily contained shall be capable of shutting off the pump when a release occurs. In addition, the pumping system shall shut down automatically if the automatic line leak detector fails or is disconnected. In lieu of the above, for underground storage tank emergency generator systems, the leak detector must be connected to an audible and visible alarm to indicate a release malfunction of the system.

(d) All underground piping and secondary containment shall be tested for tightness after installation in accordance with section 2636(e).

(e) ~~By December 31, 2003, all~~ All existing underground storage tanks shall meet all of the following:

(1) By December 31, 2003, be retrofitted with under-dispenser containment, or an under-dispenser spill containment or control system. The under-dispenser containment or under-dispenser spill containment or control system shall meet, where applicable, the requirements of section 2636(g).

(2) On and after the effective date of this subdivision, all under-dispenser containment and under-dispenser spill containment or control systems shall meet the requirements of Article 3.

(f) By October 13, 2018, all underground pressurized piping connected to an emergency generator tank system shall be retrofitted with an automatic line leak detector in accordance with section 2636(f)(2). In lieu of restricting or shutting off the flow of product through the piping, the automatic line leak detector may activate an audible and visual alarm when a leak is detected.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25284.1, 25292 and 25292.1, Health and Safety Code; and 40 CFR §§ 280.10, 280.20, 280.21, 280.32, 280.33, 280.35 and 280.44.

Article 7. Underground Storage Tank Closure Requirements

§ 2672. Permanent Closure Requirements.

(a) Owners or operators of underground storage tanks subject to permanent closure shall comply with either subsection subdivision (b) below for underground storage tank removal or subsection subdivision (c) below for closure in place. It is not essential that all portions of an

underground storage tank be permanently closed in the same manner; however, all closure actions shall be conducted in accordance with this section. ~~Subsections-Subdivisions~~ (d) and (e) below apply to all underground storage tanks subject to permanent closure.

- (b) Owners or operators of underground storage tanks subject to permanent closure shall comply with applicable provisions of Chapter 6.5 of Division 20 of the Health and Safety Code and with the following requirements:
 - (1) All residual liquid, solids, or sludges shall be removed and handled as hazardous wastes or recyclable materials in accordance with Chapter 6.5 of the Health and Safety Code.
 - (2) If the underground storage tank contained a hazardous substance that could produce flammable vapors at standard temperature and pressure, it shall be inerted to levels that shall preclude explosion or to lower levels as required by the local agency.
 - (3) When an underground storage tank or any part thereof is disposed of, the owner or operator shall document to the local agency that proper disposal has been completed. This documentation shall be submitted within the time frame specified by the local agency.
 - (4) An owner or operator of an underground storage tank or any part thereof that is destined for a specific reuse shall advise the local agency, within the time frame specified by that agency, of:
 - (A) The name of the new owner and new operator of the underground storage tank;
 - (B) The location of intended use; and
 - (C) The nature of intended use.
- (c) Owners or operators of underground storage tanks subject to permanent closure where the tanks are approved to be closed in place shall comply with the applicable provisions of Chapters 6.5 and 6.7 of Division 20 of the Health and Safety Code and with the following requirements:
 - (1) All residual liquid, solids, or sludges shall be removed and handled as a hazardous waste or recyclable materials in accordance with Chapters 6.5 and 6.7 of the Health and Safety Code.
 - (2) If the underground storage tank contained a hazardous substance that could produce flammable vapors at standard temperature and pressure, it shall be inerted to levels that shall preclude explosion or to lower levels as may be required by the local agency.
 - (3) All piping associated with the underground storage tank shall be removed and disposed of unless removal might damage structures or other pipes that are being used and that are contained in a common trench, in which case the piping to be closed shall be emptied of all contents and capped.
 - (4) The underground storage tank, except for piping that is closed in accordance with subdivision (3) above, shall be completely filled with an inert solid, unless the owner intends to use the underground storage tank for the storage of a nonhazardous

substance which is compatible with the previous use and construction of the underground storage tank.

- (d) The owner or operator of an underground storage tank being closed pursuant to this section shall demonstrate to the satisfaction of the local agency that ~~no~~an unauthorized release has not occurred. This demonstration shall be based on soil sample analysis and/or water analysis if water is present in the excavation. This analysis shall be performed during or immediately after closure activities. If the demonstration is based on soil sample analysis, soil samples shall be taken and analyzed as follows:
- (1) If the underground storage tank or any portion thereof is removed, soil samples shall be taken immediately beneath the removed portions of the tank, a minimum of two feet into native material at each end of the tank in accordance with section 2649. A separate sample shall be taken for each 20 linear-feet of trench for piping.
 - (2) If the underground storage tank or any portion thereof is not removed, at least one boring shall be taken as close as possible to the midpoint beneath the tank using a slant boring (mechanical or manual), or other appropriate method such as vertical borings drilled on each long dimensional side of the tank as approved by the local agency.
- (3) Soils shall be analyzed in accordance with section 2649 for all constituents of the previously stored hazardous substances and their breakdown or transformation products. The local agency may waive the requirement for analysis of all constituents, breakdown or transformation products when key constituents that pose a significant threat to water quality or the environment can be identified for analysis.
- (e) The detection of any reportable unauthorized release shall require compliance with the applicable requirements of Articles 5 and 11.

(f) On and after the effective date of this subdivision, owners or operators of an underground storage tank that is closed pursuant to this section shall maintain the analytical results of all soil and groundwater samples for at least 36 months after the underground storage tank system is properly closed.

Authority cited: Sections 25299.3, 25299.7 and 25299.77, Health and Safety Code.

Reference: Sections 25298 and 25299.37, Health and Safety Code; and 40 CFR §§ 280.34, 280.60, 280.61, 280.62, 280.63, 280.64, 280.65, 280.66, through 280.67, 280.71, 280.73, 280.74 and 281.36.

Article 10. Permit Application, Quarterly Report and Trade Secret Request Requirements

§ 2711. Information and Application for Permit to Operate an Underground Storage Tank.

- (a) The permit application shall include, but not be limited to, the following information to the extent such information is known to the permit applicant:
- (1) The name and address of the person who owns the underground storage tank or tanks.
 - (2) The name, location, mailing address, and telephone number where the underground storage tank is located, and type of business involved, if any.

- (3) The name, address, and telephone numbers of the underground storage tank operator and 24-hour emergency contact person.
- (4) The name and telephone number of the person making the application.
- (5) A description of the underground storage tank including, but not limited to, the underground storage tank manufacturer, date of installation, and tank capacity.
- (6) Construction details of the underground storage tank and any auxiliary equipment including, but not limited to, type of primary containment, type of secondary containment (if applicable), spill ~~containers, and~~ overfill prevention equipment, interior lining, and corrosion protection (if applicable).
- (7) A description of the piping including, but not limited to, the type of piping system, construction, material, corrosion protection, and leak detection.
- (8) A scaled diagram or design or as-built drawing which indicates the location of the underground storage tank (underground storage tank, piping, auxiliary equipment) with respect to buildings or other landmarks.
- (9) The description of the proposed monitoring program including, but not limited to, the following where applicable:
 - (A) Visual inspection procedures;
 - (B) Underground storage tank release detection methods or inspection procedures;
 - (C) Inventory reconciliation including gauging and reconciliation methods;
 - (D) Piping leak detection methods;
 - (E) Vadose zone sampling locations, and methods and analysis procedures;
 - (F) Ground water well(s) locations construction and development methods, sampling, and analysis procedures; and
- (10) A list of all ~~of~~ the substances which have been, are currently, or are proposed to be stored in the underground storage tank or tanks.
- (11) Documentation to show compliance with state and federal financial responsibility requirements applicable to underground storage tanks containing petroleum.
- (12) If the owner or operator of the underground storage tank is a public agency, the application shall include the name of the supervisor of the division, section, or office which operates the underground storage tank.
- (13) The permit application shall be signed by:
 - (A) The underground storage tank owner, underground storage tank operator, facility owner or facility operator, or a duly authorized representative of the owner; or,

(B) If the tank or facility is owned by a corporation, partnership, or public agency, the application shall be signed by:

~~4-(i)~~ A principal executive officer at the level of vice-president or by an authorized representative. The representative shall be responsible for the overall operation of the facility where the underground storage tank(s) are located; ~~or,~~

~~2-(ii)~~ A general partner proprietor; or,

~~3-(iii)~~ A principal executive officer, ranking elected official, or authorized representative of a public agency.

(b) The owner or operator shall submit to the local agency through the California Environmental Reporting System or a local reporting portal any changes to the information provided in accordance with subdivision (a) above, within 30 ~~calendar~~ days unless required to obtain approval before making the change.

(c) On and after the effective date of this subdivision, the owner or operator shall notify the local agency at least 30 days before changing the substance currently stored in the underground storage tank. The notification shall be in writing and include the substance to be stored, the date storage of the substance will begin, and compatibility documentation demonstrating compliance with sections 2630(d), 2631(b), (d), (j), (k), and (l), 2633(b), 2638(a), 2640.1, 2641(j), and 2643(f), as applicable.

~~(e)~~(d) All applicable submittal elements for the permit application must be submitted to the California Environmental Reporting System or a local reporting portal. Owners and operators shall pay all applicable local government and state surcharge fees.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25286, 25287 and 25404, Health and Safety Code; and 40 CFR §§ 280.32 and 280.34.

§ 2712. Permit Conditions.

(a) As a condition of any permit to operate an underground storage tank, the owner or operator shall comply with the reporting and recording requirements for unauthorized releases specified in Article 5.

(b) The owner or operator shall maintain the following records ~~Written monitoring and maintenance records shall be maintained on-site, or off-site at a readily available accessible location, if approved by the local agency, for the specified a period, of at least 3 years, 6 1/2 years for cathodic protection maintenance records, and 5 years for written performance claims pertaining to release detection systems, and calibration and maintenance records for such systems. Records of repairs, lining, and upgrades shall be maintained on site or at another approved location for the remaining life of the underground storage tank.~~ These records shall be made available, upon request within 36 hours, to the local agency or the State Water Board.

(1) Monitoring and maintenance records shall be maintained for at least 36 months and include the following:

~~(1)(A)~~ The date and time of all monitoring or sampling;

~~(2) Monitoring equipment calibration and maintenance records;~~

~~(3)(B)~~ The results of any visual observations;

~~(4)(C)~~ The results of all sample analysis performed in the laboratory or in the field, including laboratory data sheets and analysis used;

~~(5)(D)~~ The logs of all readings of gauges or other monitoring equipment, ground water elevations, or other test results; ~~and~~

~~(6)(E)~~ The results of inventory readings and reconciliations;

(F) The results of testing; and

(G) The results of inspections.

(2) Records pertaining to the release detection system, such as written performance claims, calibration, and maintenance records shall be maintained for at least 60 months;

(3) Records pertaining to a cathodic protection system shall be maintained for at least 78 months;

(4) On and after October 13, 2018, the record of the site assessment required for vapor and groundwater monitoring shall be maintained for as long as the monitoring methods are used;

(5) On and after the effective date of this paragraph, documentation of the underground tank system's compatibility with the stored substance, in accordance with sections 2711(c), shall be maintained for as long as the system is used to store the specific substance; and

(6) Records of repairs, lining, and upgrades shall be maintained for the remaining life of the underground storage tank.

(c) A permit to operate issued by the local agency shall be effective for ~~5 years~~ 60 months. In addition to other information specified by the local agency, the permit shall include the permit expiration date, California Environmental Reporting System identification number, monitoring requirements, and the state underground storage tank identification number(s) for which the permit was issued. Before a local agency issues a new permit or renewal to operate an underground storage tank the local agency shall inspect the underground storage tank and determine that it complies with the provisions of these regulations.

(d) Permits may be transferred to new underground storage tank owners if: (1) the new underground storage tank owner does not change conditions of the permit; and (2) the transfer is reported to the local agency by submitting all of the required submittal elements in the California Environmental Reporting System or a local reporting portal within 30 days of the change in ownership. Transferred permits shall expire and be renewed on the original expiration date. A local agency may review, modify, or terminate the permit to operate the underground storage tank upon receiving an ownership transfer request.

- (e) The local agency shall not renew an underground storage tank permit unless the underground storage tank has been inspected by the local agency or a special inspector within the previous 12 months and the inspection verified that the underground storage tank complied with the provisions of Article 3 or 4, as applicable, and with all existing permit conditions. The inspection shall be conducted as specified in section 25288 of Chapter 6.7 of Division 20 of the Health and Safety Code. If the inspection indicated noncompliance then the local agency shall verify by a follow-up inspection that all required corrections have been implemented before renewing the permit.
- (f) Within 30 ~~calendar~~ days of receiving an inspection report from either the local agency or the special inspector, the permit holder shall implement the corrections specified in the inspection report and comply with the permit conditions. The corrective action shall include all of the recommendations made by the local agency or special inspector. The local agency may waive the implementation of any of the special inspector's recommendations based on a demonstration by the permit holder to the local agency's satisfaction that failure to implement the recommendation will not cause an unauthorized release.
- (g) The local agency shall take appropriate enforcement action pursuant to section 25299 of the Health and Safety Code or prohibit the operation of the tank systems if the owner or operator fails to comply with the monitoring requirements in Article 3 or 4 or the reporting requirements of Article 5.
- (h) The local agency shall provide the permittee with a written list of all applicable requirements of Chapter 6.7 and 6.75 of the Health and Safety Code and these regulations.
- (i) A paper or electronic copy of the permit and all conditions and attachments, including monitoring plans, shall be readily accessible at the facility.
- (j) All primary containment shall be product-tight.
- (k) Owners and operators shall use care to prevent releases due to spilling or overfilling. Before product is delivered, owners, operator, or their agents shall ensure that the space available in the tank is greater than the volume of product to be transferred to the tank and shall ensure that the transfer operation is monitored constantly to prevent overfilling and spilling.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25284, 25285, 25286, 25288, 25289, 25293, 25294 and 25404, Health and Safety Code; and 40 CFR §§ ~~280.30, 280.31(d), 280.32, 280.33(f), 280.34, 280.36,~~ 280.45 and 281.32(e).

§ 2715. Certification, Licensing, and Training Requirements for Underground Storage Tank Owners, Operators, Facility Employees, Installers, Service Technicians, and Inspectors.

- (a) ~~(1) By January 1, 2005, owners~~ Owners or operators of underground storage tank systems shall submit through the California Environmental Reporting System or a local reporting portal, a signed statement ~~to the local agency~~ indicating that the owner or operator understands and is in compliance with all applicable underground storage tank requirements, and identifying the designated UST operator(s) for each facility owned or operated at all of the following times:-

~~(2)(1)~~ Within 30 days of installing an underground storage tank system, ~~the owner or operator, owners~~ shall submit ~~all of the following:~~a signed statement to the local agency indicating that the owner understands and is in compliance with all applicable underground storage tank requirements, and identify the designated UST operator(s) for the facility, through the California Environmental Reporting System or a local reporting portal.

(A) A signed "Underground Storage Tank Statement of Understanding and Compliance Form," located in Appendix X, indicating that the owner or operator understands and is in compliance with all applicable underground storage tank requirements; and

(B) A "Designated Underground Storage Tank Operator Identification Form," located in Appendix XI, identifying the designated UST operator(s) for the facility.

(2) The owner or operator shall submit a signed "Underground Storage Tank Statement of Understanding and Compliance Form," upon any change in the owner or operator which previously submitted the signed "Underground Storage Tank Statement of Understanding and Compliance Form," no later than 30 days after the change.

(3) The owner or operator shall submit a "Designated Underground Storage Tank Operator Identification Form" upon any change of designated UST operator(s) to the local agency ~~through the California Environmental Reporting System or a local reporting portal~~ no later than 30 days after the change.

(b) ~~Effective January 1, 2005, designated~~ Designated UST operators shall possess a current certificate issued by the International Code Council (ICC) indicating ~~he or she~~ that the individual has passed the California UST System Operator exam. The individual shall renew the ICC certification, by passing the California UST System Operator exam, every 24 months.

~~(c) The designated UST operator(s) shall perform monthly visual inspections of all underground storage tank systems for which they are designated. The results of each inspection shall be recorded in a monthly inspection report. The monthly visual inspection shall include, but is not limited to, the following:~~

~~(1) Reviewing the alarm history report or log for the previous month, and checking that each alarm condition was documented and responded to appropriately. A copy of the alarm history report or log, along with documentation describing action taken in response to any alarm(s), shall be attached to the monthly visual inspection record.~~

~~(2) Inspecting for the presence of hazardous substance, water, or debris in spill containers.~~

~~(3) Inspecting for the presence of hazardous substance, water, or debris in under-dispenser containment areas, and checking that the monitoring equipment in these areas is located in the proper position to detect a leak at the earliest possible opportunity.~~

~~(4) Inspecting for the presence of hazardous substance, water, or debris in containment sumps that, in the past month, have had an alarm for which there is no record of a service visit, and checking that the monitoring equipment in these containment sumps is located in the proper position to detect a leak at the earliest possible opportunity.~~

~~(5) Checking that all required testing and maintenance for the underground storage tank system have been completed, and documenting the dates these activities occurred.~~

~~(6) Verifying that all facility employees have been trained in accordance with subdivision (f).~~

~~(d) The designated UST operator(s) shall provide the owner or operator with a copy of each monthly inspection report and alert the owner or operator of any condition discovered during the monthly visual inspection that may require follow-up actions.~~

~~(e) The owner or operator shall maintain a copy of the monthly inspection record and all attachments for the previous twelve months. The records shall be maintained on-site or, if approved by the local agency, off-site at a readily available location.~~

~~(f)(c) By July 1, 2005, and every twelve months thereafter, the The designated UST operator(s) shall train facility employees ~~for which he or she is responsible~~ in the proper operation and maintenance of the underground storage tank system at least once every 12 months. For facility employees hired ~~on or after July 1, 2005, before October 13, 2018,~~ the initial training shall be conducted within 30 days of the date of hire. For individuals assuming the duties of a facility employee on or after October 13, 2018, the initial training shall be conducted before the individual performs the duties of a facility employee.~~

(1) ~~The~~ Through a practical demonstration, the training for facility employees must include, but is not limited to, the following:

(A) The operation of the underground storage tank system in a manner consistent with the facility's best management practices.

(B) The facility employee's role with regard to the monitoring equipment as specified in the facility's monitoring plan.

(C) The facility employee's role with regard to spills and overfills as specified in the facility's response plan.

(D) The name of the contact person(s) for emergencies and monitoring equipment alarms.

(2) At least one of the facility employees present during operating hours shall have current training in accordance with ~~subdivision (f) paragraph (1) above~~. For facilities that are not routinely staffed, the designated UST operator shall implement a facility employee training program approved by the local agency.

(3) A list of facility employees who have been trained by the designated UST operator(s), shall be maintained on-site or off-site at a readily available location, if approved by the local agency. The list shall be provided to the local agency upon request. The list shall include the dates of training for all facility employees, and the hiring dates for all facility employees hired on or after July 1, 2005.

(4) Notwithstanding paragraph (3) above, on and after the effective date of this paragraph, upon completion of the facility employee training, the designated UST operator(s) shall provide a signed "Facility Employee Training Certificate," located in Appendix XII, to the owner or operator for facility employees that have received training. The certificates

shall be maintained on-site or off-site at a readily accessible location, if approved by the local agency, and provided to the local agency upon request.

~~(g)~~(d) Any person(s) installing underground storage tank systems or components shall be certified or licensed by the Contractors State License Board.

~~(h)~~(e) Any individual(s) installing underground storage tank system components shall meet the following requirements, or work under the direct and personal supervision of an individual physically present at the work site who meets the following requirements:

- (1) The individual has been adequately trained as evidenced by a certificate of training issued by the manufacturer(s) of the underground storage tank system components. ~~On and after July 1, 2001, this~~ This certification shall be renewed by completion of manufacturer's refresher training at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
- (2) ~~Effective January 1, 2005, the~~ The individual shall possess a current underground storage tank system installer certificate from the International Code Council (ICC), indicating that the individual has passed the ICC UST Installation/Retrofitting exam. The individual shall renew the ICC certification, by passing the ICC UST Installation/Retrofitting exam, every 24 months.

~~(i)~~(f) Any individual performing the work of a service technician must meet all of the following requirements:

- (1) Possess or be employed by a person who possesses a current Class "A" General Engineering Contractor License, C-10 Electrical Contractor License, C-34 Pipeline Contractor License, C-36 Plumbing Contractor License, or a C-61 (D40) Limited Specialty Service Station Equipment and Maintenance Contractor License issued by the Contractors State License Board, as applicable. Individuals who possess a tank testing license issued by the State Water Resources Control Board satisfy the licensing requirement of this paragraph.
- (2) Be trained and certified by the manufacturer of the equipment as follows:
 - (A) For service technicians conducting secondary containment testing pursuant to section 2637~~(a)~~, this training and certification may be obtained through the manufacturer of the secondary containment system being tested or through the developer of the testing equipment or test method being used in accordance with sections 2637(c), or through the manufacturer of the secondary containment system being tested, as applicable.
 - (B) For service technicians performing work on monitoring equipment, training and certification shall be obtained from the manufacturer of the monitoring equipment.
 - (C) On and after the effective date of this paragraph, for service technicians conducting spill container testing pursuant to section 2637.1, this training and certification may be obtained through the manufacturer of the spill container being tested or through the developer of the testing equipment or test method being used in accordance with section 2637.1(b).

(D) For service technicians conducting overfill prevention equipment inspections pursuant to section 2637.2, this training and certification may be obtained through the manufacturer of the overfill prevention equipment being inspected or through the developer of the inspection method being used, in accordance with 2637.2(b).

~~(C)~~(E) In the event that no training or certification exists that would satisfy the criteria of subparagraph ~~(i)(2)(A)~~, ~~or (B)~~, (C), or (D) above, the local agency may approve comparable alternate training or certification.

- (3) Renew all training and certifications issued by the manufacturer, through completion of a manufacturer's refresher course, at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
- (4) ~~Effective July 1, 2005, service~~ Service technicians shall possess or work under the direct and personal supervision of an individual physically present at the work site who possesses a current certificate from the International Code Council (ICC), indicating ~~he or she~~ the individual has passed the California UST Service Technician exam. ~~If the California UST Service Technician exam is not available by July 1, 2004, this requirement shall be effective twelve months after the date the exam is available.~~ The individual shall renew the ICC certification, by passing the California UST Service Technician exam, every 24 months.

~~(f)~~(g) Local agency inspectors or special inspectors conducting underground storage tank inspections must meet the following requirements:

- (1) ~~Effective September 1, 2005, these individuals shall possess~~ Possess a current inspector certificate issued by the International Code Council (ICC), indicating ~~he or she~~ the individual has passed the ICC California UST Inspector exam. Local agency inspectors ~~hired on or after September 1, 2005,~~ are subject to this requirement 180 days from the date of hire. ~~If the ICC California UST Inspector exam is not available by September 1, 2004, this requirement shall be effective twelve months after the date the exam is available.~~
- (2) ~~These individuals shall renew~~ Renew the California inspector certificate at least once every 24 months, by either passing the ICC California UST Inspector exam or satisfying equivalent criteria as approved by the Division of Water Quality Underground Storage Tank Program Manager.

Authority cited: Section 25299.3, Health and Safety Code.

Reference: Sections 25281, 25284.1 and 25404, Health and Safety Code; and 40 CFR §§ 280.20, 280.22, 280.34, 280.40, 280.42, 280.242, 280.240, 280.243 and 280.245.

§ 2716. Designated UST Operator Visual Inspection.

(a) On and after the effective date of this section, all underground storage tank systems shall have a visual inspection performed by a designated UST operator at least once every 30 days in accordance with all subdivisions below.

(b) The designated UST operator visual inspection shall identify compliance issues which cause the underground storage tank system to be out of compliance with this chapter and include, but not be limited to, all of the following:

- (1) Review of the previous "Designated Underground Storage Tank Operator Visual Inspection Report" to verify each compliance issue identified by the designated UST operator during the previous visual inspection required by subdivision (a) above, was responded to appropriately and documented;
- (2) Review of the alarm history since the previous visual inspection required by subdivision (a) above, to verify that each alarm condition was documented and responded to appropriately;
- (3) Review of the testing and maintenance records for the underground storage tank system to verify that all required testing and maintenance have been completed and document the dates these activities occurred;
- (4) Review of the facility employee training records to verify that all facility employees have been trained in accordance with section 2715(c);
- (5) Inspect the spill container for damage and for the presence of any hazardous substance, water, or debris;
- (6) Inspect the fill pipe for obstructions;
- (7) Inspect the fill cap to verify it is securely on the fill pipe;
- (8) Inspect under-dispenser containment areas for damage and for the presence of any hazardous substance, water, or debris and check that the monitoring equipment in these areas is located in the proper position to detect a leak at the earliest possible opportunity; and
- (9) Inspect containment sumps that have had an alarm since the previous visual inspection required by subdivision (a) above, for which there is no record of a service visit. Inspect the containment sumps for damage and for the presence of any hazardous substance, water, or debris and check that the monitoring equipment in these containment sumps is located in the proper position to detect a leak at the earliest possible opportunity.

(c) The results of the designated UST operator(s) visual inspection shall be recorded on the "Designated Underground Storage Tank Operator Visual Inspection Report" located in Appendix XIII. The report shall include, but not be limited to, all of the following:

- (1) A copy of documentation demonstrating action taken in response to each compliance issue identified by the designated UST operator during the previous visual inspection required by subdivision (a) above;
- (2) A list of each compliance issue identified by the designated UST operator during the previous visual inspection, required by subdivision (a) above, for which there is no record of action taken to correct;

- (3) A copy of the alarm history since the previous visual inspection required by subdivision (a) above;
- (4) A copy of documentation demonstrating action taken in response to each alarm since the previous visual inspection required by subdivision (a) above;
- (5) A list of each alarm since the previous visual inspection, required by subdivision (a) above, for which there is no documentation demonstrating any action taken in response; and
- (6) A list of each area inspected and whether each area inspected is acceptable or needs follow-up action taken.
- (d) Within 48 hours of the completion of the designated UST operator visual inspection required by subdivision (a) above, the designated UST operator shall sign and provide the owner or operator with a copy of the “Designated Underground Storage Tank Operator Visual Inspection Report.” In addition, the designated UST operator shall alert the owner or operator of any compliance issues discovered during the visual inspection that may require follow-up actions such as damage to the underground storage tank system, obstructions in the fill pipe, or liquid or debris present in under-dispenser containment areas, containment sumps, and spill containers.
- (e) Within 48 hours of being provided a signed copy of the “Designated Underground Storage Tank Operator Visual Inspection Report,” the owner or operator shall provide a description of each corrective action taken. The description shall be provided on the copy of the “Designated Underground Storage Tank Operator Visual Inspection Report” signed by the designated UST operator and the owner or operator shall sign and date the report, acknowledging the identified compliance issues.
- (f) Owners or operators shall maintain a copy of the “Designated Underground Storage Tank Operator Visual Inspection Report” and all attachments for 12 months. On and after the effective date of this subdivision, copies of the “Designated Underground Storage Tank Operator Visual Inspection Report” and all attachments shall be maintained for 36 months. The records shall be maintained on-site or, if approved by the local agency, off-site at a readily accessible location.

Authority cited: Section 25299.3, Health and Safety Code.

Reference: Sections 25281, 25284.1 and 25404, Health and Safety Code; and 40 CFR § 280.36.

Appendix III

Examples of Quantitative Release Detection
Methods for Existing Tanks

Detection Method	Performance Standards
Automatic Tank Gauging (Monthly)	Section 2643(b)(1)
Automatic Tank Gauging (Monthly) and Manual Inventory Reconciliation (Monthly)	Section 2643(b)(2)
Tank Integrity Test (Annually) and Manual Inventory Reconciliation (Monthly)	Section 2643(b)(4)
Statistical Inventory Reconciliation (Monthly) and Tank Integrity Testing (Biennially)	Section 2643(b)(3)
Manual Tank Gauging (Weekly) and Tank Integrity Testing (Annually)	Section 2645

Examples of Quantitative Release Detection
Methods for Single-Walled Pressure Piping

Detection Method	Performance Standards
Automatic Line Leak Detector (Hourly) and Automatic Electronic Line Leak Detector (Monthly)	Section 2643(c)(1) Section 2643(c)(2)
Automatic Line Leak Detector (Hourly) and Automatic Electronic Line Leak Detector (Annually)	Section 2643(c)(1) Section 2643(c)(3)
Automatic Line Leak Detector (Hourly) and Line Tightness Test (Annually)	Section 2643(c)(1) Section 2643(c)(3)
Automatic Electronic Line Leak Detectors (Hourly) (meets both 2643(c)(1) and (3) standards)	Section 2643(c)(3)

Examples of Qualitative Release Detection
Methods for Single-Walled Suction Piping

Line Tightness Test (Triennially) and Daily Monitoring	Section 2643(d) Appendix II
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Example of Qualitative Release Detection
Methods for Single-Walled Gravity Flow Piping

Line Tightness Test (Biennially)	Section 2643(e)
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Examples of Qualitative Release Detection
Methods for Existing Tanks and Piping

Vapor Monitoring or	Sections 2644(a) and (b) and 2647
Ground Water Monitoring	Sections 2644(a) and (c) and 2648

Appendix III

Examples of Quantitative Release Detection Methods for Existing Tanks

<u>Detection Method</u>	<u>Performance Standards</u>
<u>Automatic Tank Gauging (At least once every 30 days)</u>	<u>Section 2643(b)(1)</u>
<u>Statistical Inventory Reconciliation (At least once every 30 days) and Tank Integrity Testing (At least once every 24 months)</u>	<u>Section 2643(b)(2)</u>
<u>Continuous In-tank Leak Detection (At least once every 30 days)</u>	<u>Section 2643(b)(3)</u>

Examples of Quantitative Release Detection Methods for Single-Walled Pressurized Piping

<u>Detection Method</u>	<u>Performance Standards</u>
<u>Automatic Mechanical Line Leak Detector (Hourly) and 0.2 Gallons Per Hour Monitoring (At least once every 30 days)</u>	<u>Section 2643(c)(1) & Section 2643(c)(2)</u>
<u>Automatic Mechanical Line Leak Detector (Hourly) and Line Tightness Test (At least once every 12 months)</u>	<u>Section 2643(c)(1) & Section 2643(c)(3)</u>
<u>Automatic Electronic Line Leak Detector (Hourly) and (At least once every 30 days or 12 months) (meets both section 2643(c)(1) and (2) or (3))</u>	<u>Section 2643(c)(1) & Section 2643(c)(2) or Section 2643(c)(3)</u>

Examples of Qualitative Release Detection Methods for Single-Walled Suction Piping

<u>Detection Method</u>	<u>Performance Standards</u>
<u>Line Tightness Test (At least once every 36 months) and Daily Monitoring</u>	<u>Section 2643(d) & Appendix II</u>

Example of Qualitative Release Detection Methods for Single-Walled Gravity Flow Piping

<u>Detection Method</u>	<u>Performance Standards</u>
<u>Line Tightness Test (At least once every 24 months)</u>	<u>Section 2643(e)</u>

Examples of Qualitative Release Detection Methods for Existing Tanks and Piping

<u>Detection Method</u>	<u>Performance Standards</u>
<u>Vapor Monitoring (Continuous)</u>	<u>Sections 2644(a), (b), & 2647</u>
<u>Ground Water Monitoring (At least once every 30 days)</u>	<u>Sections 2644(a), (c), & 2648</u>

Appendix VI

(Copies of Monitoring System Certification form and UST Monitoring Plot Plan available at
<http://www.waterboards.ca.gov>)

MONITORING SYSTEM CERTIFICATION

For Use By All Jurisdictions Within the State of California

Authority Cited: Chapter 6.7, Health and Safety Code; Chapter 16, Division 3, Title 23, California Code of Regulations

This form must be used to document testing and servicing of monitoring equipment. A separate certification or report must be prepared for each monitoring system control panel by the technician who performs the work. A copy of this form must be provided to the tank system owner/operator. The owner/operator must submit a copy of this form to the local agency regulating UST systems within 30 days of test date.

A. General Information

Facility Name: _____ Bldg. No.: _____
 Site Address: _____ City: _____ Zip: _____
 Facility Contact Person: _____ Contact Phone No.: (____) _____
 Make/Model of Monitoring System: _____ Date of Testing/Servicing: ____/____/____

B. Inventory of Equipment Tested/Certified

Check the appropriate boxes to indicate specific equipment inspected/serviced:

<p>Tank ID: _____</p> <input type="checkbox"/> In-Tank Gauging Probe. Model: _____ <input type="checkbox"/> Annular Space or Vault Sensor. Model: _____ <input type="checkbox"/> Piping Sump / Trench Sensor(s). Model: _____ <input type="checkbox"/> Fill Sump Sensor(s). Model: _____ <input type="checkbox"/> Mechanical Line Leak Detector. Model: _____ <input type="checkbox"/> Electronic Line Leak Detector. Model: _____ <input type="checkbox"/> Tank Overfill / High-Level Sensor. Model: _____ <input type="checkbox"/> Other (specify equipment type and model in Section E on Page 2): _____	<p>Tank ID: _____</p> <input type="checkbox"/> In-Tank Gauging Probe. Model: _____ <input type="checkbox"/> Annular Space or Vault Sensor. Model: _____ <input type="checkbox"/> Piping Sump / Trench Sensor(s). Model: _____ <input type="checkbox"/> Fill Sump Sensor(s). Model: _____ <input type="checkbox"/> Mechanical Line Leak Detector. Model: _____ <input type="checkbox"/> Electronic Line Leak Detector. Model: _____ <input type="checkbox"/> Tank Overfill / High-Level Sensor. Model: _____ <input type="checkbox"/> Other (specify equipment type and model in Section E on Page 2): _____
<p>Tank ID: _____</p> <input type="checkbox"/> In-Tank Gauging Probe. Model: _____ <input type="checkbox"/> Annular Space or Vault Sensor. Model: _____ <input type="checkbox"/> Piping Sump / Trench Sensor(s). Model: _____ <input type="checkbox"/> Fill Sump Sensor(s). Model: _____ <input type="checkbox"/> Mechanical Line Leak Detector. Model: _____ <input type="checkbox"/> Electronic Line Leak Detector. Model: _____ <input type="checkbox"/> Tank Overfill / High-Level Sensor. Model: _____ <input type="checkbox"/> Other (specify equipment type and model in Section E on Page 2): _____	<p>Tank ID: _____</p> <input type="checkbox"/> In-Tank Gauging Probe. Model: _____ <input type="checkbox"/> Annular Space or Vault Sensor. Model: _____ <input type="checkbox"/> Piping Sump / Trench Sensor(s). Model: _____ <input type="checkbox"/> Fill Sump Sensor(s). Model: _____ <input type="checkbox"/> Mechanical Line Leak Detector. Model: _____ <input type="checkbox"/> Electronic Line Leak Detector. Model: _____ <input type="checkbox"/> Tank Overfill / High-Level Sensor. Model: _____ <input type="checkbox"/> Other (specify equipment type and model in Section E on Page 2): _____
<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).	<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).
<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).	<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).
<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).	<p>Dispenser ID: _____</p> <input type="checkbox"/> Dispenser Containment Sensor(s). Model: _____ <input type="checkbox"/> Shear Valve(s). <input type="checkbox"/> Dispenser Containment Float(s) and Chain(s).

*If the facility contains more tanks or dispensers, copy this form. Include information for every tank and dispenser at the facility.

C. Certification -- I certify that the equipment identified in this document was inspected/serviced in accordance with the manufacturers' guidelines. Attached to this Certification is information (e.g. manufacturers' checklists) necessary to verify that this information is correct and a Plot Plan showing the layout of monitoring equipment. For any equipment capable of generating such reports, I have also attached a copy of the report; (check all that apply): System set-up Alarm history report

Technician Name (print): _____ Signature: _____
 Certification No.: _____ License No.: _____
 Testing Company Name: _____ Phone No.: (____) _____
 Testing Company Address: _____ Date of Testing/Servicing: ____/____/____

Monitoring System Certification **Page 1 of 4**
 12/07

D. Results of Testing/Servicing

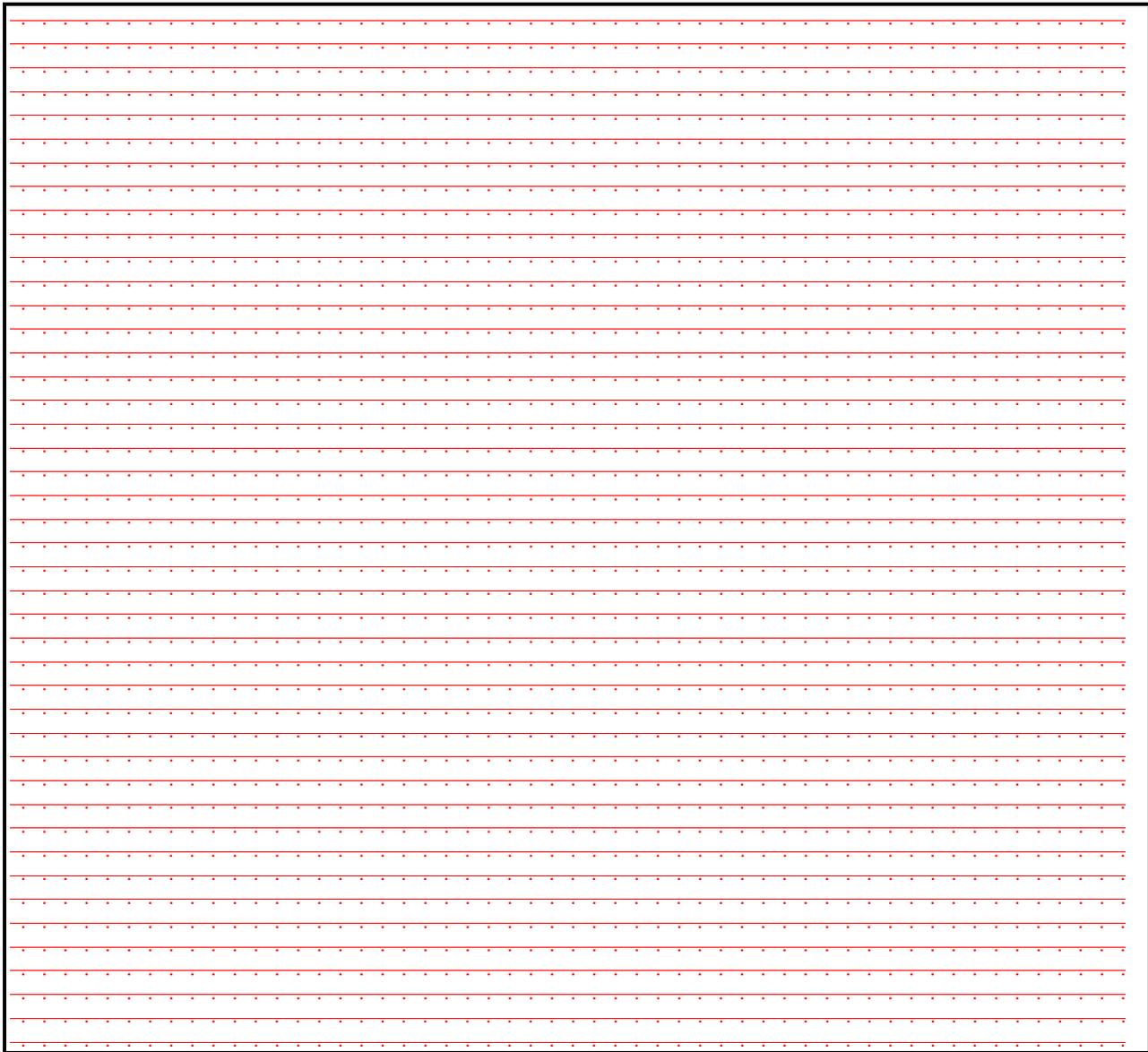
Software Version Installed: _____

Complete the following checklist:

<input type="checkbox"/> Yes	<input type="checkbox"/> No*	Is the audible alarm operational?
<input type="checkbox"/> Yes	<input type="checkbox"/> No*	Is the visual alarm operational?

UST Monitoring Site Plan

Site Address:



Date map was drawn: ____/____/____.

Instructions

If you already have a diagram that shows all required information, you may include it, rather than this page, with your Monitoring System Certification. On your site plan, show the general layout of tanks and piping. Clearly identify locations of the following equipment, if installed: monitoring system control panels; sensors monitoring tank annular spaces, sumps, dispenser pans, spill containers, or other secondary containment areas; mechanical or electronic line leak detectors; and in-tank liquid level probes (if used for leak detection). In the space provided, note the date this Site Plan was prepared.

**UNDERGROUND STORAGE TANK
MONITORING SYSTEM CERTIFICATION FORM (Page 2 of 6)**

VI. INVENTORY OF EQUIPMENT CERTIFIED

A separate Monitoring System Certification Form must be prepared for each monitoring system control panel.

MAKE/MODEL OF MONITORING SYSTEM	SOFTWARE VERSION INSTALLED
---------------------------------	----------------------------

Check the appropriate boxes to indicate specific equipment inspected/serviced.

TANK ID # <i>(By tank number, stored product, etc.)</i>	A.	TANK ID # <i>(By tank number, stored product, etc.)</i>	B.
MONITORING METHOD	DEVICE MODEL #	MONITORING METHOD	DEVICE MODEL #
TANK		TANK	
<input type="checkbox"/> IN-TANK GAUGING		<input type="checkbox"/> IN-TANK GAUGING	
<input type="checkbox"/> ANNULAR SPACE or VAULT SENSOR		<input type="checkbox"/> ANNULAR SPACE or VAULT SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE		<input type="checkbox"/> VACUUM/PRESSURE	
PRODUCT PIPING		PRODUCT PIPING	
<input type="checkbox"/> MECHANICAL LINE LEAK DETECTOR		<input type="checkbox"/> MECHANICAL LINE LEAK DETECTOR	
<input type="checkbox"/> ELECTRONIC LINE LEAK DETECTOR		<input type="checkbox"/> ELECTRONIC LINE LEAK DETECTOR	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
FILL PIPING		FILL PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
VENT PIPING		VENT PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
VAPOR RECOVERY PIPING		VAPOR RECOVERY PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
TANK ID # <i>(By tank number, stored product, etc.)</i>	C.	TANK ID # <i>(By tank number, stored product, etc.)</i>	D.
MONITORING METHOD	DEVICE MODEL #	MONITORING METHOD	DEVICE MODEL #
TANK		TANK	
<input type="checkbox"/> IN-TANK GAUGING		<input type="checkbox"/> IN-TANK GAUGING	
<input type="checkbox"/> ANNULAR SPACE or VAULT SENSOR		<input type="checkbox"/> ANNULAR SPACE or VAULT SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE		<input type="checkbox"/> VACUUM/PRESSURE	
PRODUCT PIPING		PRODUCT PIPING	
<input type="checkbox"/> MECHANICAL LINE LEAK DETECTOR		<input type="checkbox"/> MECHANICAL LINE LEAK DETECTOR	
<input type="checkbox"/> ELECTRONIC LINE LEAK DETECTOR		<input type="checkbox"/> ELECTRONIC LINE LEAK DETECTOR	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
FILL PIPING		FILL PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
VENT PIPING		VENT PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	
VAPOR RECOVERY PIPING		VAPOR RECOVERY PIPING	
<input type="checkbox"/> VACUUM/PRESSURE (PIPING)		<input type="checkbox"/> VACUUM/PRESSURE (PIPING)	
<input type="checkbox"/> SUMP SENSOR		<input type="checkbox"/> SUMP SENSOR	
<input type="checkbox"/> VACUUM/PRESSURE (SUMP)		<input type="checkbox"/> VACUUM/PRESSURE (SUMP)	

**UNDERGROUND STORAGE TANK
MONITORING SYSTEM CERTIFICATION FORM (Page 5 of 6)**

XII. LINE LEAK DETECTORS (LLD) TESTING

CHECK THIS BOX IF LLD ARE NOT INSTALLED. (Do not complete this section.)

This section must be completed if LLDs are installed.

WAS A LEAK SIMULATED TO VERIFY LLD PERFORMANCE?

(Check all that apply.) SIMULATED LEAK RATE VERIFIED:

3 G.P.H.;

0.1 G.P.H.;

0.2 G.P.H

Y N NA

WAS THE TESTING APPARATUS PROPERLY CALIBRATED?

FOR MECHANICAL LLDs, DOES THE LLD RESTRICT THE FLOW OF PRODUCT WHEN A LEAK IS DETECTED?

FOR ELECTRONIC LLDs, DOES THE TURBINE AUTOMATICALLY SHUT OFF WHEN A LEAK IS DETECTED?

FOR ELECTRONIC LLDs, DOES THE TURBINE AUTOMATICALLY SHUT OFF IF ANY PORTION OF THE MONITORING SYSTEM IS DISABLED OR DISCONNECTED?

FOR ELECTRONIC LLDs, DOES THE TURBINE AUTOMATICALLY SHUT OFF IF ANY PORTION OF THE MONITORING SYSTEM MALFUNCTIONS OR FAILS A TEST?

FOR ELECTRONIC LLDs, HAVE ALL ACCESSIBLE WIRING CONNECTIONS BEEN VISUALLY INSPECTED FOR KINKS AND BREAKS?

WERE ALL ITEMS ON THE EQUIPMENT MANUFACTURER'S MAINTENANCE CHECKLIST COMPLETED?

WERE ALL LLDs CONFIRMED OPERATIONAL AND ACCURATE WITHIN REGULATORY REQUIREMENTS?

For any answer of "N" above, describe below, how and when these issues were or will be corrected.

XIII. COMMENTS

XIV. VACUUM/PRESSURE MONITORING EQUIPMENT TESTING

CHECK THIS BOX IF VACUUM/PRESSURE MONITORING IS NOT USED. (Do not complete this section.)

This section must be completed if vacuum or pressure is used to perform leak detection monitoring.

SYSTEM TYPE

PRESSURE

VACUUM

SENSOR ID	COMPONENT(S) MONITORED BY THIS SENSOR	SENSOR FUNCTIONALITY TEST	INTERSTITIAL COMMUNICATION TEST
1.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
2.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
3.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
4.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
5.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
6.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
7.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
8.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
9.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
10.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
11.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
12.		<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL

HOW WAS INTERSTITIAL COMMUNICATION VERIFIED?

SIMULATED LEAK AT FAR END OF INTERSTITIAL SPACE

VISUAL INSPECTION

OTHER (Describe the method in section XV. below.)

GAUGE

WAS VACUUM OR PRESSURE RESTORED TO OPERATING LEVELS IN ALL INTERSTITIAL SPACES?

YES

NO

(Describe the reason in section XV. below.)

For any answer of "FAIL" above, describe below, how and when these issues were or will be corrected.

XV. COMMENTS

**UNDERGROUND STORAGE TANK
MONITORING SYSTEM CERTIFICATION FORM (Page 6 of 6)**

XVI. UST MONITORING SITE PLAN

DATE SITE MAP WAS PREPARED:

If you already have a site plan that shows all required information, you may include it, rather than this page, with your Monitoring System Certification Form. The site plan must show the general layout of tanks and piping and clearly identify locations of the following equipment, if installed: 1) monitoring system control panels; 2) in-tank liquid level probes (if used for leak detection); 3) sensors monitoring tank annular spaces; 4) sensor monitoring product piping; 5) sensors monitoring fill piping; 6) sensors monitoring vent piping; 7) sensors monitoring vapor recovery piping; 8) sensors monitoring vent/transition sump; 9) sensors monitoring under-dispenser containment; 10) line leak detectors; and 11) any other monitored secondary containment areas.

LEGEND

Appendix VII

**UNDERGROUND STORAGE TANK
SECONDARY CONTAINMENT TESTING REPORT FORM (Page 1 of 4)**

TYPE OF ACTION
 INSTALLATION TEST
 REPAIR TEST
 SIX MONTH TEST
 36 MONTH TEST

I. FACILITY INFORMATION

<u>CERS ID #</u>	<u>DATE OF TEST</u>	
<u>BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As)</u>		
<u>BUSINESS SITE ADDRESS</u>	<u>CITY</u>	<u>ZIP CODE</u>

II. UNDERGROUND STORAGE TANK SERVICE TECHNICIAN INFORMATION

<u>NAME OF UST SERVICE TECHNICIAN PERFORMING TEST (As shown on the ICC certification.)</u>	<u>PHONE (_____)</u>	
<u>CONTRACTOR/TANK TESTER LICENSE #</u>	<u>ICC CERTIFICATION #</u>	<u>ICC CERTIFICATION EXPIRATION DATE</u>

III. SUMMARY OF SECONDARY CONTAINMENT TESTING RESULTS

<u>TANK ID # (By tank number, stored product, etc.)</u>	<u>A.</u>	<u>B.</u>	<u>C.</u>
TANK CONTAINMENT			
<u>TIGHTNESS TEST</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A
PRODUCT/FILL PIPING CONTAINMENT			
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A
<u>COMMUNICATION TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> N/A
VENT PIPING CONTAINMENT			
<u>TIGHTNESS TEST RESULTS</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>COMMUNICATION TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
VAPOR RECOVERY PIPING CONTAINMENT			
<u>TIGHTNESS TEST RESULTS</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>COMMUNICATION TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
TURBINE/PRODUCT PIPING SUMP			
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
FILL RISER SUMP			
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>VENT/TRANSITION SUMP ID #</u>	<u>a.</u>	<u>b.</u>	<u>c.</u>
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>UNDER-DISPENSER CONTAINMENT ID #</u>	<u>1/2</u>	<u>9/10</u>	<u>17/18</u>
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>UNDER-DISPENSER CONTAINMENT ID #</u>	<u>3/4</u>	<u>11/12</u>	<u>19/20</u>
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>UNDER-DISPENSER CONTAINMENT ID #</u>	<u>5/6</u>	<u>13/14</u>	<u>21/22</u>
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA
<u>UNDER-DISPENSER CONTAINMENT ID #</u>	<u>7/8</u>	<u>15/16</u>	<u>23/24</u>
<u>TIGHTNESS TEST RESULT</u>	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> NA

Any items marked "Fail" or "N/A" must be explained in their respective "COMMENTS" section.

IV. CERTIFICATION OF UST SERVICE TECHNICIAN RESPONSIBLE FOR CONDUCTING THIS TESTING

I hereby certify that the secondary containment was tested in accordance with California Code of Regulations, title 23, division 3, chapter 16, section 2637 and all the information contained in this report is true and accurate.

UST SERVICE TECHNICIAN SIGNATURE

**UNDERGROUND STORAGE TANK
SECONDARY CONTAINMENT TESTING REPORT FORM (Page 2 of 4)**

V. TANK SECONDARY CONTAINMENT INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<i>Attach the testing procedures and all documentation required to determine the results.</i>	# OF PAGES
--	------------

TANK SECONDARY CONTAINMENT TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

VI. COMMENTS

Provide any additional comments here.

VII. PRODUCT/FILL PIPING SECONDARY CONTAINMENT INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<i>Attach the testing procedures and all documentation required to determine the results.</i>	# OF PAGES
--	------------

PRODUCT/FILL PIPING SECONDARY CONTAINMENT TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

COMMUNICATION VERIFICATION METHOD USED:

VIII. COMMENTS

Provide any additional comments here.

IX. VENT PIPING SECONDARY CONTAINMENT TESTING INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<i>Attach the testing procedures and all documentation required to determine the results.</i>	# OF PAGES
--	------------

VENT PIPING SECONDARY CONTAINMENT TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

COMMUNICATION VERIFICATION METHOD USED:

X. COMMENTS

Provide any additional comments here.

**UNDERGROUND STORAGE TANK
SECONDARY CONTAINMENT TESTING REPORT FORM (Page 3 of 4)**

XI. VAPOR RECOVERY PIPING SECONDARY CONTAINMENT TESTING INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<u>Attach the testing procedures and all documentation required to determine the results.</u>	# OF PAGES
--	------------

VAPOR RECOVERY PIPING SECONDARY CONTAINMENT TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

COMMUNICATION VERIFICATION METHOD USED:

XII. COMMENTS

Provide any additional comments here.

XIII. TURBINE/PRODUCT PIPING SUMP TESTING INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<u>Attach the testing procedures and all documentation required to determine the results.</u>	# OF PAGES
--	------------

TURBINE/PIPING SUMP TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

XIV. COMMENTS

Provide any additional comments here.

XV. FILL RISER SUMP TESTING INFORMATION

MANUFACTURER	<u>A.</u>	<u>B.</u>	<u>C.</u>
--------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

<u>Attach the testing procedures and all documentation required to determine the results.</u>	# OF PAGES
--	------------

FILL RISER SUMP TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.)

XVI. COMMENTS

Provide any additional comments here.

**UNDERGROUND STORAGE TANK
SECONDARY CONTAINMENT TESTING REPORT FORM (Page 4 of 4)**

XVII. VENT/TRANSITION SUMP TESTING INFORMATION

MANUFACTURER	a.	b.	c.
---------------------	-----------	-----------	-----------

TEST METHOD USED: MANUFACTURER GUIDELINES *(Specify)*
 INDUSTRY CODE OR ENGINEERING STANDARD *(Specify)*
 ENGINEERED METHOD *(Specify)*

<u>Attach the testing procedures and all documentation required to determine the results.</u>	# OF PAGES
--	-------------------

PIPING TRANSITION SUMP TESTING TRAINING AND CERTIFICATIONS *(List applicable certifications.)*

XVIII. COMMENTS

Provide any additional comments.

XIX. UNDER-DISPENSER CONTAINMENT TESTING INFORMATION

MANUFACTURER	<u>1/2</u>	<u>9/10</u>	<u>17/18</u>
	<u>3/4</u>	<u>11/12</u>	<u>19/20</u>
	<u>5/6</u>	<u>13/14</u>	<u>21/22</u>
	<u>7/8</u>	<u>15/16</u>	<u>23/24</u>

TEST METHOD USED: MANUFACTURER GUIDELINES *(Specify)*
 INDUSTRY CODE OR ENGINEERING STANDARD *(Specify)*
 ENGINEERED METHOD *(Specify)*

<u>Attach the testing procedures and all documentation required to determine the results.</u>	# OF PAGES
--	-------------------

UNDER-DISPENSER CONTAINMENT TESTING TRAINING AND CERTIFICATIONS *(List applicable certifications.)*

XX. COMMENTS

Provide any additional comments here.

Appendix VIII

**UNDERGROUND STORAGE TANK
SPILL CONTAINER TESTING REPORT FORM (Page 1 of 1)**

TYPE OF ACTION INSTALLATION TEST REPAIR TEST 12 MONTH TEST

I. FACILITY INFORMATION

CERS ID # _____ DATE OF TEST _____

BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As.) _____

BUSINESS SITE ADDRESS _____ CITY _____ ZIP CODE _____

II. UNDERGROUND STORAGE TANK SERVICE TECHNICIAN INFORMATION

NAME OF UST SERVICE TECHNICIAN PERFORMING TEST (As shown on the ICC certification.) _____ PHONE (_____) _____

CONTRACTOR/TANK TESTER LICENSE # _____ ICC CERTIFICATION # _____ ICC CERTIFICATION EXPIRATION DATE _____

SPILL CONTAINER TESTING TRAINING AND CERTIFICATIONS (List applicable certifications.) _____

III. SPILL CONTAINER TESTING INFORMATION

TEST METHOD USED:
 MANUFACTURER GUIDELINES (Specify) _____
 INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____
 ENGINEERED METHOD (Specify) _____

Attach the testing procedures and all documentation required to determine the results. # OF PAGES _____

TANK ID # (By tank number, stored product, etc.)	A.	B.	C.
SPILL CONTAINER MANUFACTURER			
METHOD OF CATHODIC PROTECTION	<input type="checkbox"/> NON-METALLIC <input type="checkbox"/> ISOLATION <input type="checkbox"/> OTHER (Specify below in section V.)	<input type="checkbox"/> NON-METALLIC <input type="checkbox"/> ISOLATION <input type="checkbox"/> OTHER (Specify below in section V.)	<input type="checkbox"/> NON-METALLIC <input type="checkbox"/> ISOLATION <input type="checkbox"/> OTHER (Specify below in section V.)
INSIDE DIAMETER OF SPILL CONTAINER (Inches)			
DEPTH OF SPILL CONTAINER (Inches)			
IS THE MINIMUM CAPACITY OF THE SPILL CONTAINMENT AT LEAST FIVE GALLONS?	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
METHOD TO KEEP THE SPILL CONTAINER EMPTY	<input type="checkbox"/> DRAIN VALVE <input type="checkbox"/> ONSITE PUMP <input type="checkbox"/> OTHER (Specify below in section V.)	<input type="checkbox"/> DRAIN VALVE <input type="checkbox"/> ONSITE PUMP <input type="checkbox"/> OTHER (Specify below in section V.)	<input type="checkbox"/> DRAIN VALVE <input type="checkbox"/> ONSITE PUMP <input type="checkbox"/> OTHER (Specify below in section V.)

IV. SUMMARY OF TESTING RESULTS

SPILL CONTAINER TEST RESULTS PASS FAIL PASS FAIL PASS FAIL

V. COMMENTS

Any items marked "No" or "Fail" above must be explained in this section. Provide any additional comments here.

VI. CERTIFICATION OF UST SERVICE TECHNICIAN RESPONSIBLE FOR CONDUCTING THIS TEST

I hereby certify that the spill containers were tested in accordance with California Code of Regulations, title 23, division 3, chapter 16, section 2637.1 and all the information contained in this report is true and accurate.

UST SERVICE TECHNICIAN SIGNATURE _____

Appendix IX

**UNDERGROUND STORAGE TANK
OVERFILL PREVENTION EQUIPMENT INSPECTION REPORT FORM (Page 1 of 1)**

TYPE OF ACTION INSTALLATION INSPECTION REPAIR INSPECTION 36 MONTH INSPECTION

I. FACILITY INFORMATION

CERS ID #		DATE OF INSPECTION
BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As.)		
BUSINESS SITE ADDRESS	CITY	ZIP CODE

II. UNDERGROUND STORAGE TANK SERVICE TECHNICIAN INFORMATION

NAME OF UST SERVICE TECHNICIAN PERFORMING INSPECTION (As shown on the ICC certification.)		PHONE (____)
CONTRACTOR/TANK TESTER LICENSE #	ICC CERTIFICATION #	ICC CERTIFICATION EXPIRATION DATE
OVERFILL PREVENTION EQUIPMENT INSPECTION TRAINING AND CERTIFICATIONS (List applicable certifications.)		

III. OVERFILL PREVENTION EQUIPMENT INSPECTION INFORMATION

INSPECTION METHOD USED:

MANUFACTURER GUIDELINES (Specify) _____

INDUSTRY CODE OR ENGINEERING STANDARD (Specify) _____

ENGINEERED METHOD (Specify) _____

Attach the inspection procedures and all documentation required to determine the results. # OF PAGES

TANK ID # (By tank number, stored product, etc.)	A.	B.	C.
DATE UST SYSTEM INSTALLED (MM/DD/YYYY)			
TANK INSIDE DIAMETER (Inches)			
FILL PIPING SECONDARILY CONTAINED	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
VENT PIPING SECONDARILY CONTAINED	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
OVERFILL PREVENTION EQUIPMENT MANUFACTURER(S)			
OVERFILL PREVENTION EQUIPMENT RESPONSE WHEN ACTIVATED (Check all that apply.)	<input type="checkbox"/> AUTOMATIC SHUTOFF <input type="checkbox"/> RESTRICTED FLOW <input type="checkbox"/> VISUAL/AUDIBLE ALARM	<input type="checkbox"/> AUTOMATIC SHUTOFF <input type="checkbox"/> RESTRICTED FLOW <input type="checkbox"/> VISUAL/AUDIBLE ALARM	<input type="checkbox"/> AUTOMATIC SHUTOFF <input type="checkbox"/> RESTRICTED FLOW <input type="checkbox"/> VISUAL/AUDIBLE ALARM
ARE FLOW RESTRICTORS IN VENT PIPING INSTALLED?	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
PERCENT CAPACITY AT WHICH THE OVERFILL PREVENTION EQUIPMENT IS SET TO ACTIVATE			
LEVEL AT WHICH THE OVERFILL PREVENTION EQUIPMENT ACTIVATES (Inches from bottom of tank.)			
OVERFILL PREVENTION EQUIPMENT IS IN PROPER OPERATING CONDITION TO RESPOND WHEN THE SUBSTANCE STORED REACHES THE APPROPRIATE LEVEL	<input type="checkbox"/> YES <input type="checkbox"/> NO (Specify in section V.)	<input type="checkbox"/> YES <input type="checkbox"/> NO (Specify in section V.)	<input type="checkbox"/> YES <input type="checkbox"/> NO (Specify in section V.)

IV. SUMMARY OF INSPECTION RESULTS

OVERFILL PREVENTION INSPECTION RESULTS	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL	<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
--	---	---	---

V. COMMENTS

Any items marked "Fail" must be explained in this section. Provide any additional comments here.

VI. CERTIFICATION OF UST SERVICE TECHNICIAN RESPONSIBLE FOR CONDUCTING THIS INSPECTION

I hereby certify that the overfill prevention equipment was inspected in accordance with California Code of Regulations, title 23, division 3, chapter 16, section 2637.2 and all the information contained in this report is true and accurate.

UST SERVICE TECHNICIAN SIGNATURE

Appendix X

**UNDERGROUND STORAGE TANK
STATEMENT OF UNDERSTANDING AND COMPLIANCE FORM (Page 1 of 1)**

Every underground storage tank (UST) facility must submit a one-time statement indicating that the owner or operator understands and is in compliance with all applicable UST requirements. A copy of this completed form must be submitted via either the California Environmental Reporting System or an equivalent local Unified Program Agency electronic reporting portal within 30 days of: 1) an installation of a UST; or 2) a change in owner or operator of the UST, as applicable. (California Code of Regulations, tit. 23, div. 3, ch. 16, §2715(a).)

TYPE OF ACTION NEW INSTALLATION CHANGE OF OWNERSHIP CHANGE OF OPERATOR

I. FACILITY INFORMATION

<u>BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As.)</u>		<u>CERS ID #</u>
<u>BUSINESS SITE ADDRESS</u>	<u>CITY</u>	<u>ZIP CODE</u>

II. OWNER/OPERATOR INFORMATION

<u>RELATIONSHIP TO TANK</u> <input type="checkbox"/> <u>OWNER</u> <input type="checkbox"/> <u>OPERATOR</u>		
<u>TANK OWNER/OPERATOR NAME</u>		<u>PHONE (_____)</u>
<u>MAILING ADDRESS</u>	<u>CITY</u>	<u>ZIP CODE</u>
<u>OWNER/OPERATOR TYPE</u> <input type="checkbox"/> <u>NON-GOVERNMENT</u> <input type="checkbox"/> <u>LOCAL AGENCY/DISTRICT</u> <input type="checkbox"/> <u>COUNTY AGENCY</u> <input type="checkbox"/> <u>FEDERAL AGENCY</u> <input type="checkbox"/> <u>STATE AGENCY</u>		

III. CERTIFICATION OF UNDERSTANDING AND COMPLIANCE

I hereby certify that I understand the underground storage tank requirements of Health and Safety Code, division 20, chapter 6.7, California Code of Regulations, title 23, division 3, chapter 16, and any applicable local underground storage tank ordinances and that the facility listed above is in compliance with all applicable underground storage tank requirements.

<u>OWNER/OPERATOR SIGNATURE</u>	<u>DATE</u>
---------------------------------	-------------

Appendix XI

**UNDERGROUND STORAGE TANK
DESIGNATED UNDERGROUND STORAGE TANK OPERATOR IDENTIFICATION FORM (Page 1 of 1)**

Every underground storage tank (UST) facility must have at least one designated UST operator. A copy of this completed form must be electronically submitted via either the California Environmental Reporting System or an equivalent local Unified Program Agency electronic reporting portal within 30 days of: 1) an installation a UST; 2) a change in owner or operator of the UST; or 3) an addition or change of an individual performing designated UST operator inspections and/or facility employee training at this facility. (California Code of Regulations, tit. 23, div. 3, ch. 16, §2715(a).)

TYPE OF ACTION

NEW UST INSTALLATION CHANGE OF OWNER OR OPERATOR NEW OR CHANGE OF DESIGNATED UST OPERATOR

I. FACILITY INFORMATION

BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As.)		CERS ID #
BUSINESS SITE ADDRESS	CITY	ZIP CODE

The individual(s) listed below will conduct and document the facility inspections and facility employee training, for the facility listed above, in accordance with California Code of Regulations, title 23, division 3, chapter 16, sections 2715(c) and 2716.

II. DESIGNATED UNDERGROUND STORAGE TANK OPERATOR(S) INFORMATION

NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()
NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.)	ICC CERTIFICATION #
DESIGNATED UST OPERATOR ADDRESS	PHONE ()

Attach additional page(s) containing all the information in section II, if more alternates are used.

Appendix XII

**UNDERGROUND STORAGE TANK
FACILITY EMPLOYEE TRAINING CERTIFICATE (Page 1 of 1)**

I. FACILITY INFORMATION

<u>BUSINESS NAME (Same as FACILITY NAME or DBA-Doing Business As.)</u>		<u>CERS ID #</u>
<u>BUSINESS SITE ADDRESS</u>	<u>CITY</u>	<u>ZIP CODE</u>

II. DESIGNATED UNDERGROUND STORAGE TANK OPERATOR INFORMATION

<u>NAME OF DESIGNATED UST OPERATOR PERFORMING TRAINING (As shown on the ICC certification.)</u>		
<u>MAILING ADDRESS</u>		
<u>PHONE NUMBER</u>		
<u>ICC CERTIFICATION #</u>	<u>ICC CERTIFICATION EXPIRATION DATE</u>	

III. FACILITY EMPLOYEE INFORMATION

Individuals assuming the duties of the facility employee before October 13, 2018 must be trained within 30 days of performing facility employee duties.
Individuals assuming the duties of the facility employee on and after October 13, 2018 must be trained before performing facility employee duties.

Check this box if a list of the individual(s) trained is appended to this form instead of listed below. The appended list at a minimum must contain the names of the individuals trained, the initial training date of the individual, and the date the individual assumed the responsibilities of a facility employee.

<u>NAME OF INDIVIDUAL TRAINED</u>	<u>INITIAL TRAINING DATE</u>	<u>DATE OF ASSUMING RESPONSIBILITIES OF FACILITY EMPLOYEE</u>
<u>1.</u>		
<u>2.</u>		
<u>3.</u>		
<u>4.</u>		
<u>5.</u>		
<u>6.</u>		
<u>7.</u>		
<u>8.</u>		
<u>9.</u>		
<u>10.</u>		
<u>11.</u>		
<u>12.</u>		
<u>13.</u>		
<u>14.</u>		
<u>15.</u>		

IV. CERTIFICATION OF DESIGNATED UST OPERATOR RESPONSIBLE FOR CONDUCTING TRAINING

The facility employees listed above, through a practical demonstration, have completed the required training in accordance with California Code of Regulations, title23, division 3, chapter 16, section 2715(c) and all the information contained in this certification is true and accurate.

<u>DESIGNATED UST OPERATOR SIGNATURE</u>	<u>DATE</u>
--	-------------

Appendix XIII

UNDERGROUND STORAGE TANK

DESIGNATED UNDERGROUND STORAGE TANK OPERATOR VISUAL INSPECTION REPORT (Page 1 of 2)

I. FACILITY INFORMATION

CERS ID # _____ DATE OF FACILITY INSPECTION _____

BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As.)

BUSINESS SITE ADDRESS _____ CITY _____ ZIP CODE _____

II. INSPECTING DESIGNATED UNDERGROUND STORAGE TANK OPERATOR INFORMATION

NAME OF DESIGNATED UST OPERATOR (As shown on the ICC certification.) _____ PHONE (_____)

ICC CERTIFICATION # _____ ICC CERTIFICATION EXPIRATION DATE _____

III. COMPLIANCE ISSUES

Any answer of "N" or "NA" in sections VII. through XI. should be explained in this section and may require follow-up action.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

IV. DESIGNATED UNDERGROUND STORAGE TANK OPERATOR CERTIFICATION

I hereby certify that the information provided herein is true, accurate, and the visual inspection was performed in full compliance with California Code of Regulations, title 23, division 3, chapter 16, section 2716.

DESIGNATED UNDERGROUND STORAGE TANK OPERATOR SIGNATURE

V. OWNER/OPERATOR DESCRIPTION OF FOLLOW-UP ACTIONS

Note: Each item listed in section III. above, must have a description of the action taken to correct the issue.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

VI. OWNER/OPERATOR ACKNOWLEDGMENT OF COMPLIANCE ISSUES

I have reviewed section III. "ITEMS REQUIRING FOLLOW-UP ACTION" and have provided a description of the action taken or to be taken to correct the issues discovered.

OWNER/OPERATOR SIGNATURE _____ DATE _____

**UNDERGROUND STORAGE TANK
DESIGNATED UNDERGROUND STORAGE TANK OPERATOR VISUAL INSPECTION REPORT (Page 2 of 2)**

VII. INSPECTION HISTORY

HAS EACH FOLLOW-UP ACTION OF SECTION III. FROM THE PREVIOUS INSPECTION BEEN COMPLETED APPROPRIATELY?
(Attach documentation verifying appropriate service to this report.)

Y N

VIII. ALARM HISTORY

Attach a copy of the alarm history report/log to this report.

Y N NA

IS THE MONITORING SYSTEM POWERED ON AND IN PROPER OPERATING MODE?

HAS EACH LEAK DETECTION ALARM SINCE THE PREVIOUS INSPECTION BEEN RESPONDED TO APPROPRIATELY?
(Attach documentation verifying appropriate service to this report.)

HAVE ALL CONTAINMENT SUMPS, THAT HAVE HAD A LEAK DETECTION ALARM SINCE THE PREVIOUS INSPECTION, BEEN RESPONDED TO BY A QUALIFIED UST SERVICE TECHNICIAN?
(List below, all containment sumps that have had a leak detection alarm since the previous inspection and have **not** been responded to by a qualified UST service technician.)

SUMP LOCATION (By tank number, stored product, sump type, etc.)

a.

b.

c.

SUMP LOCATION (By tank number, stored product, sump type, etc.)

d.

e.

f.

Only the containment sumps listed above require a visual inspection for damage, water, debris, hazardous substance, and proper sensor location. The results of the visual inspection must be recorded in section VIII.

IX. UNDERGROUND STORAGE TANK SYSTEM INSPECTION

IS THE CONTAINMENT SUMP FREE OF DAMAGE, WATER, DEBRIS, AND HAZARDOUS SUBSTANCE?

SUMP LOCATION

Y N

SUMP LOCATION

Y N

a.

b.

c.

ARE ALL SENSORS IN CONTAINMENT SUMPS INSPECTED LOCATED TO DETECT A LEAK AT THE EARLIEST OPPORTUNITY?

IS THE SPILL CONTAINER FREE OF DAMAGE, WATER, DEBRIS, AND HAZARDOUS SUBSTANCE?

TANK ID #

A.

B.

C.

D.

IS THE FILL PIPE FREE OF OBSTRUCTIONS?

TANK ID #

A.

B.

C.

D.

IS THE FILL CAP SECURELY ON THE FILL PIPE?

TANK ID #

A.

B.

C.

D.

IS THE UNDER-DISPENSER CONTAINMENT FREE OF DAMAGE, WATER, DEBRIS, AND HAZARDOUS SUBSTANCE?

UNDER-DISPENSER ID #

Y N NA

UNDER-DISPENSER ID #

Y N NA

1/2

3/4

5/6

7/8

ARE ALL SENSORS IN UNDER-DISPENSER CONTAINMENT LOCATED TO DETECT A LEAK AT THE EARLIEST OPPORTUNITY?

X. TESTING AND MAINTENANCE

Y N NA

DATE LAST PERFORMED

HAS THE MONITORING SYSTEM CERTIFICATION BEEN COMPLETED WITHIN THE PAST 12 MONTHS?

HAS THE SPILL CONTAINER TESTING BEEN COMPLETED WITHIN THE PAST 12 MONTHS?

HAS THE OVERFILL PREVENTION EQUIPMENT INSPECTION BEEN COMPLETED WITHIN THE PAST 36 MONTHS?

HAS THE SECONDARY CONTAINMENT TESTING BEEN COMPLETED WITHIN THE PAST 36 MONTHS?

HAS THE TANK TIGHTNESS TESTING BEEN COMPLETED WITHIN REQUIRED TIMEFRAMES?

HAS THE LINE TIGHTNESS TESTING BEEN COMPLETED WITHIN THE REQUIRED TIMEFRAMES?

OTHER REQUIRED TESTING/MAINTENANCE WAS COMPLETED WITHIN REQUIRED TIMEFRAME. (List test/maintenance items below.)

TEST/MAINTENANCE:

TEST/MAINTENANCE:

TEST/MAINTENANCE:

TEST/MAINTENANCE:

XI. FACILITY EMPLOYEE TRAINING

Y N

HAVE ALL INDIVIDUALS PERFORMING FACILITY EMPLOYEE DUTIES RECEIVED THE REQUIRED FACILITY EMPLOYEE TRAINING WITHIN THE PAST 12 MONTHS?

Note: Any answer of "N" or "NA" should be explained in section III. on the previous page, and may require follow-up action

Y = Yes, N = No, NA = Not Applicable