

Title 23 Regulations Final Text, approved by OAL on December 18, 2007, effective January 17, 2008.

§ 2621. Exemptions to the Regulations.

(a) The term "underground storage tank" excludes the following, except those of the following included in the definition of an underground storage tank in 40 CFR, part 280.12 as modified by paragraphs (b), (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 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) 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 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: Sections 25299.3 and 25299.7, Health and Safety Code.

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

§ 2632. Monitoring and Response Plan Requirements for New Underground Storage Tanks Constructed Pursuant to Section 2631.

(a) This section is applicable only to underground storage tanks constructed pursuant to the requirements of section 2631.

(b) Owners or operators of underground storage tanks subject to this section shall implement a monitoring program approved by the local agency and specified in the underground storage tank operating permit. The program shall include interstitial space monitoring as described in subsection (c) and shall include the items listed in subsection (d).

(c) Monitoring of the interstitial space shall include either visual monitoring of the primary containment system as described in subsection (c)(1) or one or more of the methods listed in subsection (c)(2).

(1) A visual monitoring program shall incorporate all of the following:

(A) All exterior surfaces of the underground storage tanks and the surface of the floor directly beneath the underground storage tanks shall be capable of being monitored by direct viewing.

(B) Visual inspections shall be performed daily, except on weekends and recognized state and/or federal holidays. Inspections may be more frequent if required by the local agency or the local agency may reduce the frequency of visual monitoring at facilities where personnel are not normally present and inputs to and withdrawals from the underground storage tanks are very infrequent. In these instances, visual inspection shall be made weekly. The inspection schedule shall take into account the minimum anticipated time during which the secondary containment system is capable of containing any unauthorized release and the maximum length of time any hazardous substance released from the primary containment system will remain observable on the surface of the secondary containment system. The inspection schedule shall be such that inspections will occur on a routine basis when the liquid level in the tanks is at its highest. The inspection frequency shall be such that any unauthorized release will remain observable on the exterior of or the surface immediately beneath the underground storage tanks between visual inspections. The evaluation of the length of time the hazardous substance remains observable shall consider the volatility of the hazardous substance and the porosity and slope of the surface immediately beneath the tanks.

(C) The liquid level in the tank shall be recorded at the time of each inspection.

(D) If any liquid is observed around or beneath the primary containment system, the owner or operator shall, if necessary, have the liquid analyzed in the field using a method approved by the local agency or in a laboratory to determine if an unauthorized release has occurred. The owner or operator shall have a tank integrity test conducted, if necessary, to determine whether the primary containment system is leaking. If a leak is confirmed, the owner or operator shall comply with the applicable provisions of Article 5, Article 6, and Article 7.

(2) A monitoring program which relies on the mechanical or electronic detection of the hazardous substance in the interstitial space shall include one or more of the methods in Table 3.2. The following requirements shall apply when appropriate:

(A) The interstitial space of the tank shall be monitored using a continuous monitoring system which meets the requirements of section 2643(f).

(B) The continuous monitoring system shall be connected to an audible and visual alarm system approved by the local agency.

(C) For methods of monitoring where the presence of the hazardous substance is not determined directly, for example, where liquid level measurements in the interstitial space are used as the basis for determination, the monitoring program shall specify the proposed method(s) for determining the presence or absence of the hazardous substance in the interstitial space if the indirect methods indicate a possible unauthorized release.

(d) All monitoring programs shall include the following:

(1) A written procedure for 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, identified by name and model, to be used for performing the monitoring;

(C) The location(s), as identified on a plot plan, 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.

(2) A response plan which demonstrates, to the satisfaction of the local agency, that any unauthorized release will be removed from the secondary containment system within the time consistent with the ability of the secondary containment system to contain the hazardous substance, but not more than 30 calendar days or a longer period of time as approved by the local agency. The response plan shall include, but is not limited to, the following:

(A) A description of the proposed methods and equipment to be used for removing and properly disposing of any hazardous substances, including the location and availability of the required equipment if not permanently on-site, and an equipment maintenance schedule for the equipment located on-site.

(B) The name(s) and title(s) of the person(s) responsible for authorizing any work necessary under the response plan.

(e) When implementation of a monitoring program or any other condition indicates that an unauthorized release may have occurred, the owner or operator shall comply with the release reporting requirements of Article 5. If the release came from the tank system, the owner or operator shall replace, repair, or close the tank in accordance with Articles 3, 6, or 7, respectively.

Table 3.2
Methods of Monitoring for Hazardous Substances in the Interstitial Space of an Underground Storage Tank System

Methods of Monitoring

<i>Condition of the Secondary System [1]</i>	<i>Type of Substance Stored</i>	<i>Liquid Level Indicator[2]</i>	<i>Hazardous Substance Sensor[3]</i>	<i>Vapor Monitor</i>	<i>Pressure or Vacuum Loss Detector[4]</i>
Dry	Volatile	X	X	X	X
Dry	Nonvolatile	X	X		X
Wet	Volatile	X	X		X
Wet	Nonvolatile	X	X		X

[1] A "dry" system does not contain liquid within the secondary containment during normal operating conditions while a "wet" system does.

[2] Includes continuously operated mechanical or electronic devices.

[3] Includes either qualitative or quantitative determinations of the presence of the hazardous substance.

[4] Detects changes in pressure or vacuum in the interstitial space of an underground storage tank with secondary containment.

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

Reference: Sections 25281 and 25291, Health and Safety Code; 40 CFR 280.43.

§ 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 (d) of this section;

(2) The motor vehicle fuel inventory shall be reconciled according to the performance requirements in section 2646; 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 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; 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 every three years 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 corrosion protection systems with sacrificial anodes shall be checked once every three years 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 pounds per square-inch (20.68 k Pa) and not more than 5 pounds per square-inch (34.48 k Pa). 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 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 subsection (d) 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 overfill prevention system as follows:

(1) The spill container shall collect any hazardous substances spilled during product delivery operations to prevent the hazardous substance from entering the subsurface environment. The spill container shall meet the following requirements:

(A) If it is made of metal, the exterior wall shall be protected from galvanic corrosion.

(B) It shall have a minimum capacity of five gallons (19 liters).

(C) 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) The overfill prevention system shall not allow for manual override and shall meet 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) The local agency may waive the requirement for overfill prevention equipment where the tank inlet exists in an observable area, the spill container is adequate to collect any overfill, and the tank system is filled by transfers of no more than 25 gallons at one time.

(c) 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 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 subsection.

(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) Owners or their agents shall certify that the installation of the tanks and piping, meets the conditions in subdivision (1) through (4) below. The certification shall be made on an "Underground Storage Tank Certification of Installation /Modification" form in Title 27, Division 3, Subdivision 1, Chapter 6.

(1) The installer has met the requirements set forth in section 2715, subdivisions (g) and (h);

(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: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25299, Health and Safety Code; 40 CFR 280.20, 280.40-280.45.

§ 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:

(1) vent or tank riser piping, provided the primary containment system is equipped with an overfill prevention system meeting the requirements specified in sections 2635(b)(2)(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;

(D) An inspection method is provided which readily demonstrates compliance with subdivisions (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). The certification shall be made on the "Underground Storage Tank Certification of Installation/Modification" form in Title 27, Division 3, Subdivision 1, Chapter 6.

(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, 40 psi 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 per hour leak rate at 10 psi within 1 hour with a probability of detection of at least 95 percent and a probability of false alarm no greater than 5 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 subdivision (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 subdivision (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 subdivision (2).

[Editor's note – Version of (f)(3) in effect 1/17/2008]

(3) Until November 9, 2004, other monitoring methods may be used in lieu of the requirement in subdivision (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 subdivision (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 subdivision (2), for purposes of this subdivision (f)(3).

(4) Monitoring shall be conducted on all underground pressurized piping with secondary containment at least 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 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 percent probability of false alarm.

(5) Continuous monitoring systems as described in subdivision (f)(1) satisfy the annual tightness testing requirement of subdivision (f)(4) 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) For emergency generator tank systems, continuous monitoring systems as described in subdivision (1), 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 subdivision (2), provided that the monitoring system is 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.

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

(1) Owners or Operators of a UST 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 Geographic Information System mapping database.

(C) By December 31, 2003, for systems not subject to subsection 2636(g)(1)(A) or (B).

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

(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.

(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: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1 25291 and 25299, Health and Safety Code; and 40 CFR 280.20 and 280.40-280.45.

§ 2637. Secondary Containment Testing.

(a) Secondary containment systems installed on or after January 1, 2001 shall be tested upon installation, 6 months after installation, and 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) By December 31, 2002, the owner or operator of any secondary containment system 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 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, 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 guidelines, industry codes, or engineering standards a test method approved by a state registered professional engineer shall be used.

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

(e) Underground storage tank owners and operators shall submit a copy of the test report to the local agency within 30 days of the completion of the test.

(f) Owners and operators of underground storage tanks must notify the local agency at least 48 hours prior to conducting the 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: Sections 25299.3 and 25299.7, Health and Safety Code.

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

§ 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, subdivision (i).

(c) Annual monitoring equipment certification shall be made on a "Monitoring System Certification" form (see Appendix VI).

(d) UST owners and operators shall submit a completed "Monitoring System Certification" 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 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 component was certified, repaired, or replaced, and the contractor's or tank tester's license number.

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

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

§ 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 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 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 (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 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: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25296, Health and Safety Code; 40 CFR 280.33.

§ 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 underground piping containing motor vehicle fuel and connected to an existing tank shall 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.

(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 existing underground storage tanks shall 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 2636(g).

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

Reference: Sections 25284.1, 25292 and 25292.1, Health and Safety Code; 40 CFR 280.21.

§ 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 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 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:

1. 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. A general partner proprietor; or,

3. A principal executive officer, ranking elected official, or authorized representative of a public agency.

(b) The owner or operator shall inform the local agency of any changes to the information provided in accordance with subsection (a) within 30 calendar days unless required to obtain approval before making the change.

(c) The permit applications, "Underground Storage Tank Operating Permit Application-Facility Information", "Underground Storage Tank Operating Permit Application-Tank Information," and "Underground Storage Tank Monitoring Plan" in Title 27, Division 3, Subdivision 1, Chapter 6, shall be accompanied by the local government and state surcharge fees.

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

Reference: Sections 25286 and 25287, Health and Safety Code.

§ 2713. Local Agency Reporting Requirements.

(a) Each local agency shall transmit unauthorized release information, submitted by the owner or operator, to the appropriate regional board.

(b) Local agencies shall transmit unauthorized release update report information, submitted by the owner or operator pursuant to section 2712, to the appropriate regional board for sites where they are overseeing cleanup. Local agencies shall transmit this unauthorized release update information on a quarterly schedule established by the board.

(c) On a semi-annual basis, each local agency shall send to the board, information pertaining to local underground storage tank program implementation and enforcement activities. This information shall be submitted using "Semi-Annual Underground Storage Tank Program Report 6" as specified in Title 27, section 15290, and shall include, but not be limited to the number of:

- (1) tanks subject to regulation
- (2) regulated facilities
- (3) facility inspections conducted
- (4) inspected facilities in compliance with release detection and release prevention requirements
- (5) underground storage tank systems that received a red tag pursuant to Article 10.5, including:
 - (A) the name and address of the facility at which the tank system is located;
 - (B) the names of the owner and operator of the tank system;
 - (C) the red tag's identification number;
 - (D) the date the red tag was affixed to the tank system;
 - (E) the specific violation for which the tank system received the red tag;
 - (F) the date the red tag was removed from the tank system.

(d) Local agencies shall report formal and informal enforcement actions using "Annual Enforcement Summary Report 4" as specified in title 27, section 15290.

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

Reference: Sections 25286 and 25292.3, Health and Safety Code.

Appendix VI

(Copies of Monitoring System Certification form and UST Monitoring Plot Plan available at <http://www.swrcb.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:

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

Software Version Installed:

Yes	No*	Is the audible alarm operational?
Yes	No*	Is the visual alarm operational?
Yes	No*	Were all sensors visually inspected, functionally tested, and confirmed operational?
Yes	No*	Were all sensors installed at lowest point of secondary containment and positioned so that other equipment will not interfere with their proper operation?
Yes	No* N/A	If alarms are relayed to a remote monitoring station, is all communications equipment (e.g. modem) operational?
Yes	No* N/A	For pressurized piping systems, does the turbine automatically shut down if the piping secondary containment monitoring system detects a leak, fails to operate, or is electrically disconnected? If yes: which sensors initiate positive shut-down? <i>(Check all that apply)</i> Sump/Trench Sensors; Dispenser Containment Sensors. Did you confirm positive shut-down due to leaks <u>and</u> sensor failure/disconnection? Yes; No.
Yes	No* N/A	For tank systems that utilize the monitoring system as the primary tank overflow warning device (i.e. no mechanical overflow prevention valve is installed), is the overflow warning alarm visible and audible at the tank fill point(s) and operating properly? If so, at what percent of tank capacity does the alarm trigger? _____ %
Yes*	No	Was any monitoring equipment replaced? If yes, identify specific sensors, probes, or other equipment replaced and list the manufacturer name and model for all replacement parts in Section E, below.
Yes*	No	Was liquid found inside any secondary containment systems designed as dry systems? <i>(Check all that apply)</i> Product; Water. If yes, describe causes in Section E, below.
Yes	No*	Was monitoring system set-up reviewed to ensure proper settings? Attach set up reports, if applicable
Yes	No*	Is all monitoring equipment operational per manufacturer's specifications?

E. Comments:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

F. In-Tank Gauging / SIR Equipment:

Check this box if tank gauging is used only for inventory control.
Check this box if no tank gauging or SIR equipment is installed.

This section must be completed if in-tank gauging equipment is used to perform leak detection monitoring.

Complete the following checklist:

Yes	No*	Has all input wiring been inspected for proper entry and termination, including testing for ground faults?
Yes	No*	Were all tank gauging probes visually inspected for damage and residue buildup?
Yes	No*	Was accuracy of system product level readings tested?
Yes	No*	Was accuracy of system water level readings tested?
Yes	No*	Were all probes reinstalled properly?
Yes	No*	Were all items on the equipment manufacturer's maintenance checklist completed?

* In the Section H, below, describe how and when these deficiencies were or will be corrected.

G. Line Leak Detectors (LLD):

Check this box if LLDs are not installed.

Complete the following checklist:

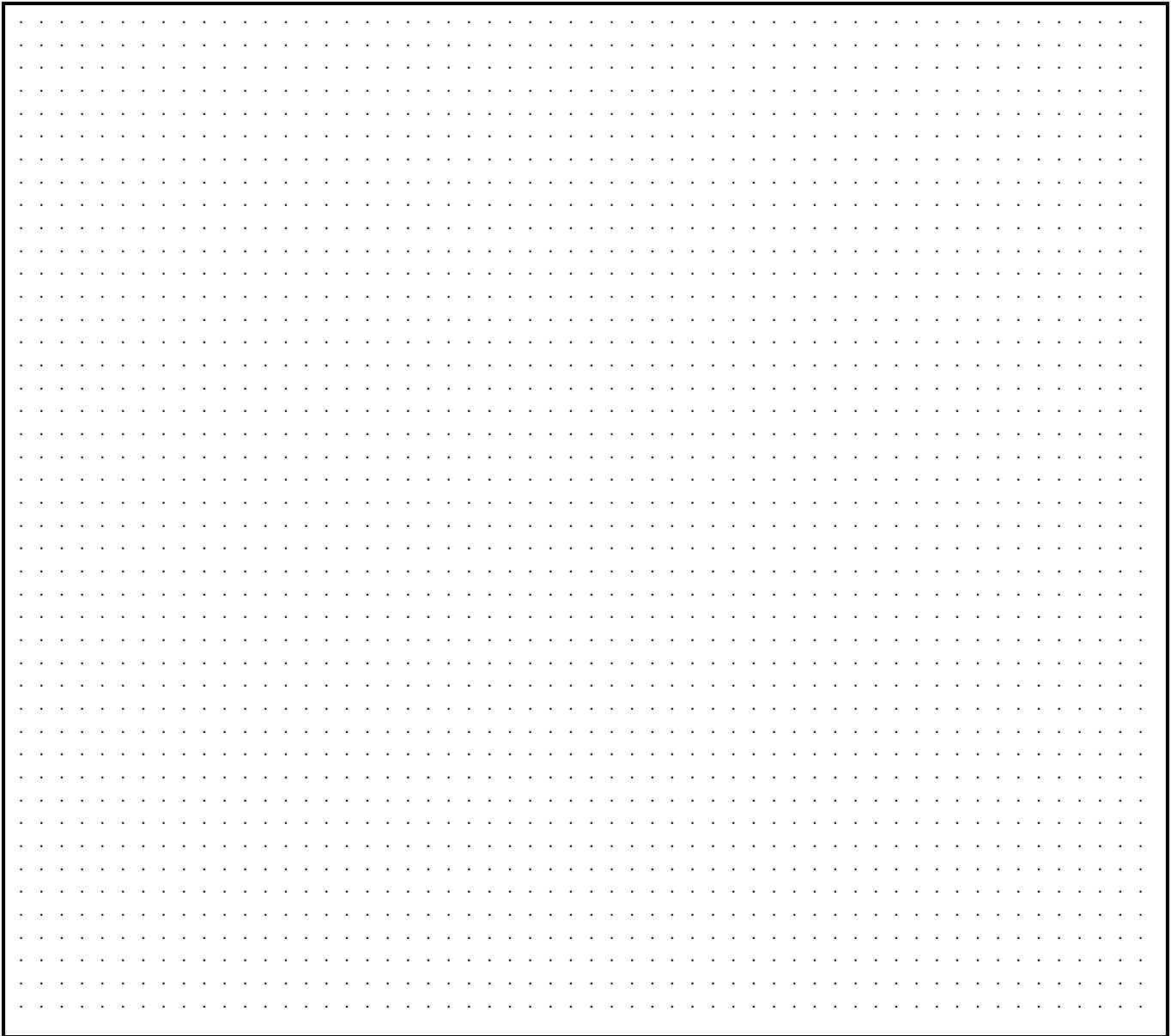
Yes	No* N/A	For equipment start-up or annual equipment certification, was a leak simulated to verify LLD performance? <i>(Check all that apply)</i> Simulated leak rate: 3 g.p.h.; 0.1 g.p.h.; 0.2 g.p.h.
Yes	No*	Were all LLDs confirmed operational and accurate within regulatory requirements?
Yes	No*	Was the testing apparatus properly calibrated?
Yes	No* N/A	For mechanical LLDs, does the LLD restrict product flow if it detects a leak?
Yes	No* N/A	For electronic LLDs, does the turbine automatically shut off if the LLD detects a leak?
Yes	No* N/A	For electronic LLDs, does the turbine automatically shut off if any portion of the monitoring system is disabled or disconnected?
Yes	No* N/A	For electronic LLDs, does the turbine automatically shut off if any portion of the monitoring system malfunctions or fails a test?
Yes	No* N/A	For electronic LLDs, have all accessible wiring connections been visually inspected?
Yes	No*	Were all items on the equipment manufacturer's maintenance checklist completed?

* In the Section H, below, describe how and when these deficiencies were or will be corrected.

H. Comments:

UST Monitoring Site Plan

Site Address: _____



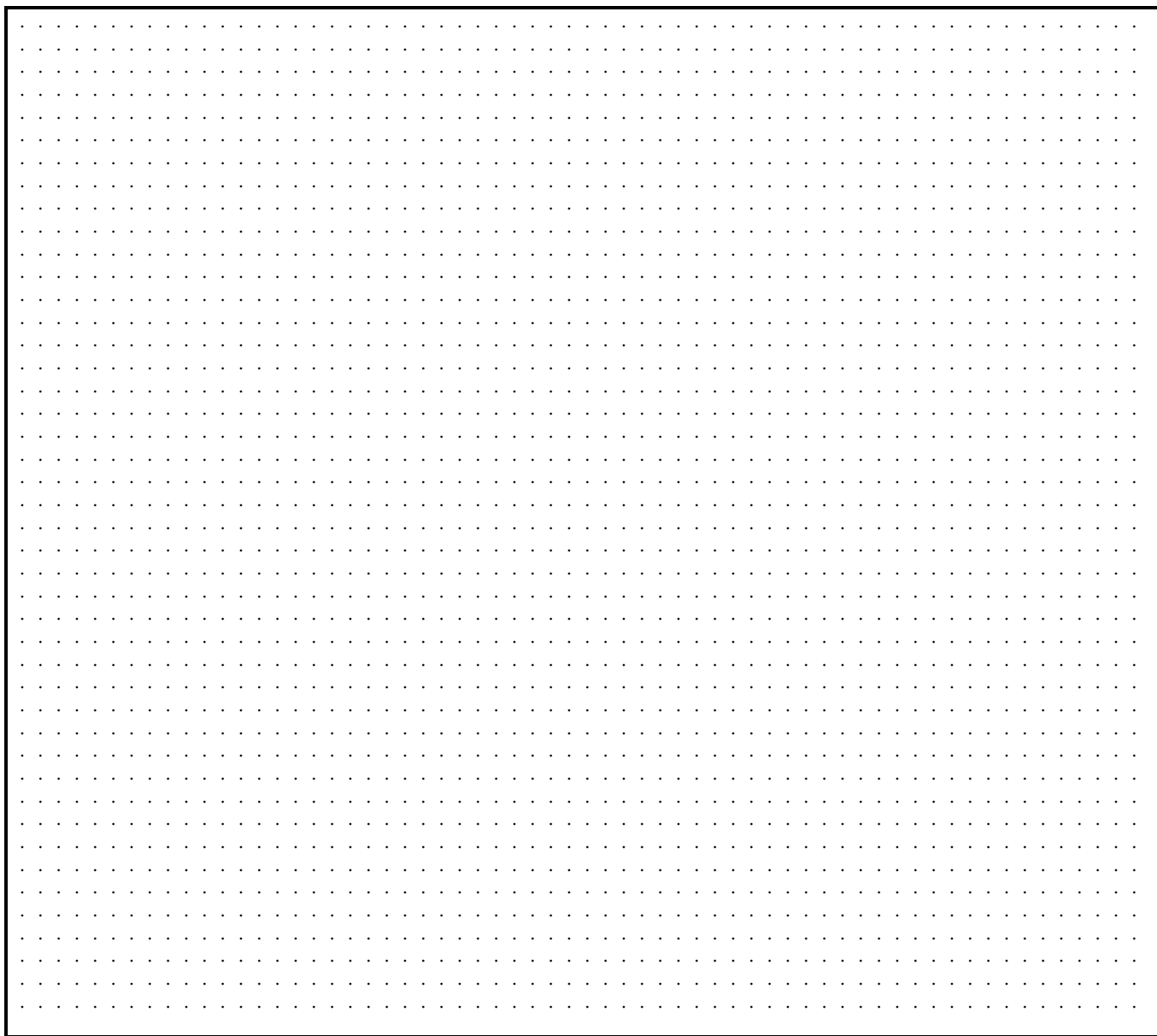
Date map was drawn: ____/____/____.

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.

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.