

UNDERGROUND STORAGE TANK SYSTEM SECONDARY CONTAINMENT TESTING REQUIREMENTS

Authority Cited: California Health and Safety Code (HSC); Title 23 California Code of Regulations (23 CCR)

A. Scope

This document addresses periodic testing of underground storage tank (UST) secondary containment systems. It supplements State Water Resources Control Board (SWRCB) Local Guidance Letter LG-160, which is available online at www.waterboards.ca.gov/water_issues/programs/ust/leak_prevention/lgs/. For compliance purposes, refer to the actual text of the regulations since the wording in this document summarizes requirements. All Unidocs forms and documents are available at www.unidocs.org.

B. General Requirements for Secondary Containment Testing

1. Secondary containment must be tested for tightness upon installation, six months after installation¹ and every 36 months thereafter, within 30 days of completion of a repair to a secondary containment component, and 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. [23 CCR §2637(a)(1)]
2. Periodic testing must be completed anytime before or during the month the testing is required.² [23 CCR §2620(e)]
3. Secondary containment equipped with continuous interstitial monitoring that automatically monitors both primary and secondary containment, such as systems that are hydrostatically monitored or under constant vacuum or pressure, is not required to be periodically tested. [23 CCR §2637(a)(2)]
4. Testing must be performed by a UST Service Technician meeting the requirements of 23 CCR §2715(f). [23 CCR §2637(d)]
5. For UST Service Technicians conducting secondary containment testing, the requirement to be trained and certified by the equipment manufacturer may be obtained through certification by the manufacturer of the secondary containment system being tested or through the developer of the testing equipment or test method being used. [23 CCR §2715(f)(2)(A)]
6. In the event that no training or certification exists that would satisfy the above criteria, the local UST Program Unified Program Agency (UPA) may approve comparable alternate training or certification. [23 CCR §2715(f)(2)(E)]
7. Testing of the following secondary containment components is recommended but not required:
 - Secondary containment for tank riser pipes and underground vent lines connected to a UST installed between July 2, 1987 and June 30, 2003, where the tank is equipped with overfill prevention in accordance with 23 CCR §2635(c)(1)(B) or (C).³ [23 CCR §2636(a)(1)]

¹ Per SWRCB guidance, the six month re-test is required after installation of piping, sumps, under dispenser containment (UDC), or other components that require “breaking concrete.” Components, such as replacement penetration fittings where all installation work is done inside containment sumps, do not require the six month re-test.

² A UST owner or operator may change the due date of the test by performing testing early, but a test conducted late will not change the due date. A UST owner or operator that performs a test early may not return to the original due date and must perform the next test before the end of the new 36 calendar month period.

³ Refer to the Unidocs *Underground Storage Tank System Overfill Prevention Equipment Inspection Requirements* (UN-117) for details.

- Secondary vapor recovery piping connected to a UST installed between July 2, 1987 and June 30, 2003, if the piping is designed so that it cannot contain liquid-phase product. [23 CCR §2636(a)(2)]
- Secondary piping for a product line that has been verified as a safe suction system. [23 CCR §2636(a)(3)]

C. Test Methods and Procedures

1. Secondary containment testing must be performed as follows: [23 CCR §2637(c)]
 - In accordance with the manufacturer's guidelines or standards.⁴
 - Using an applicable method specified in an industry code or engineering standard *if there are no manufacturer's guidelines or standards*.
 - Using a test method approved by a state-registered professional engineer (PE) *if there are no manufacturer's guidelines, industry codes, or engineering standards*.
 - Periodic testing must 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 p.s.i. for one hour, then the periodic test must be conducted using a method that tests the system at an equivalent pressure and for the same duration.
2. Under no circumstances may any primary containment system for flammable or combustible liquids, or secondary containment system holding a potentially explosive atmosphere, be pressurized with air.
3. When a manufacturer's installation guidelines/standards allow a choice between either pressure or vacuum testing of a tank annular space, it is recommended that vacuum testing be performed. If pressure testing is performed, the primary containment shall first be pressurized using nitrogen (or other approved inert gas) to a pressure equal to the intended secondary containment test pressure, so as to prevent undue stress to, or structural failure of, primary containment. Pressure shall be maintained on primary containment until pressure is released from the annular space at the conclusion of testing.
4. When hydrostatic testing is performed, all water must be removed from the secondary containment at the conclusion of testing. Except in cases where water will be reused for additional testing, a hazardous waste determination must be performed to determine whether or not it is hazardous based on ignitability or toxicity (e.g., Benzene contamination) and it must be disposed of properly based on the results. [HSC §25291(e), 22 CCR §66262.11]
5. Water removed from secondary containment systems, even if uncontaminated by hazardous materials, must not be disposed of to the storm water system. [Nonpoint Source (Urban Runoff) Ordinances]

⁴ Some manufacturers' test procedures allow for a "Pass" provided that a specified drop in pressure or vacuum is not exceeded. State law requires that UST systems installed after January 1, 1984 and prior to July 1, 2003 be product-tight [HSC §25291(a)(1)], and that UST systems installed on or after July 1, 2003 be both product-tight and vapor-tight [HSC §§25292.1(a), 25292.1(c)(1), 25290.2(a), and 25290.2(c)(1)]. When statute and regulations conflict, requirements of statute prevail. Unidocs Member Agency interpretation is that the regulatory wording of 23 CCR §2637(c) is superseded by the product-tight and vapor-tight requirements of HSC, so no drop in pressure or vacuum is allowed for a passed secondary containment test.

D. Industry Standards for Testing

1. As noted above, the use of industry codes or engineering standards is only allowed in cases where the secondary containment manufacturer does not have their own guidelines or standards.
2. Industry codes must be published.
3. The Petroleum Equipment Institute's (PEI) *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities* (PEI/RP1200-17) is one example of a generally-recognized industry standard.

E. Notification and Reporting

1. The UST owner/operator must notify the local UST Program Unified Program Agency (UPA) at least 48 hours prior to conducting secondary containment testing. [23 CCR §2637(g)]
2. Results of secondary containment testing must be recorded on the *Secondary Containment Testing Report Form* located in Appendix VII of Title 23 California Code of Regulations. [The Unidocs document number is UN-054.] [23 CCR §2637(e)]
3. A voluntary-use Unidocs *Secondary Containment Testing Report Form Supplement* (UN-054A) is also available to assist with requirements for documenting and reporting test data.
4. Pass or fail, the UST owner/operator must submit a copy of the *Secondary Containment Testing Report Form* and required attachments to the local UPA within 30 days of completion of the test. [23 CCR §2637(f)]

F. Record Keeping

The UST owner/operator must maintain secondary containment testing records on-site, or off-site at a readily accessible location *if approved by the local UPA*, for at least 36 months. These records must be made available, upon request within 36 hours, to the local UPA or the State Water Resources Control Board. [23 CCR §2712(b)(1)(F)]

G. Repairs and Retrofits

1. The owner or operator of any UST system that cannot be tested in accordance with these requirements must replace the secondary containment with a system that can be tested. [23 CCR §2637(b)]
2. Check with the local UPA regarding plan check and permit requirements before repairing or retrofitting secondary containment. UPAs cannot approve a repair or upgrade unless it can be demonstrated that the UST 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 UST system. [23 CCR §2660(k)]
[Note: Piping pressure testing boots are not regulated components.]