
State Water Resources Control Board

July 24, 2015

LOCAL GUIDANCE-171: PERMANENT CLOSURE OF UNDERGROUND STORAGE TANKS THAT DO NOT MEET HEALTH AND SAFETY CODE, CHAPTER 6.7, SECTION 25291, SUBDIVISIONS (a)(1)-(6)

To: Unified Program Agencies, Underground Storage Tank Owners and Operators, and Other Interested Parties

Senate Bill (SB) 445 (Stats. 2014, Ch. 547) authored by Assembly Member Hill became effective on September 25, 2014. SB 445 makes changes to the underground storage tank (UST) regulatory program regarding design and construction of USTs. These changes are reflected in Health and Safety Code¹ (H&SC), section 25292.05.

The main provisions of SB 445 that apply to UST design and construction are summarized herein as a question and answer format. This document will be updated to include additional questions and answers as necessary. For the complete text of this bill, visit the Office of Legislative Counsel's website at www.leginfo.ca.gov.

What does H&SC, section 25292.05 require?

On or before December 31, 2025, the owner or operator of a UST must permanently close the UST if it was designed and constructed before January 1, 1984 and does not meet the requirements of H&SC, section 25291(a)(1)-(6) or if it was designed and constructed before January 1, 1997 in accordance with paragraph (7) of H&SC, section 25291(a).

This means all regulated USTs that do not meet the requirements of H&SC, section 25291(a)(1)-(6) must be permanently closed on or before December 31, 2025 in accordance with H&SC, section 25298 and the California Code of Regulations² (Cal. Code Regs.), section 2672.

¹ All Health and Safety Code sections references herein are from chapter 6.7.

² All California Code of Regulations sections references herein are from title 23, chapter 16.

Which components of the UST are subject to permanent closure required by H&SC, section 25292.05?

H&SC, section 25292.05 requires the UST to meet H&SC, section 25291(a)(1)-(6) or be permanently closed. H&SC defines a UST as a tank or combination of tanks, including pipes connected thereto, that are used for the storage of hazardous substances. Therefore, both the tank and connected piping must meet the requirements of H&SC, section 25291(a)(1)-(6) or be permanently closed.

What is a UST that meets H&SC, section 25291(a)(1)-(6)?

A UST meets the requirements of H&SC, section 25291(a)(1)-(6) if both the tank and connected piping are designed and constructed to provide primary and secondary levels of containment (double-walled) of the hazardous substances stored in it. The primary containment is product tight (liquid-tight only) and compatible with the substance stored. The secondary containment is constructed to prevent structural weakening as a result of contact with any released hazardous substances, and also capable of storing the hazardous substances for the maximum anticipated period of time necessary for the recovery of any released hazardous substance. The double-walled UST must have a continuous leak detection system capable of detecting the entry of the stored hazardous substances from the primary container into the interstitial space of the tank and capable of detecting water intrusion into the interstitial space of the tank from the environment.

For the purpose of this guidance letter, a single-walled UST is a UST where either the tank and/or the connected piping do not have secondary containment and a continuous leak detection system meeting the requirements of H&SC, section 25291(a)(1)-(6).

What are some examples of single-walled USTs?

A UST installed before January 1, 1984 that has either a single-walled tank or connected single-walled piping is a single-walled UST. Another combination of a single-walled UST is a UST installed between January 1, 1984 and January 1, 1997, which has a single-walled tank that uses an exterior membrane liner (e.g., Hytrel Liner) or monitoring wells to detect any release of the stored substance. A UST installed between January 1, 1984 and July 1, 1987 that has a double-walled tank and connected single-walled piping also is considered a single-walled UST. However, there are some components of a UST installed before July 1, 2003 that are exempt from secondary containment requirements. Vapor recovery lines are exempt from secondary containment requirements if the lines are designed and constructed to not hold standing fluid. Vent lines and tank riser piping (vapor/vent risers and fill risers) are exempt from secondary containment requirements if designed and constructed to not hold standing fluid and the UST is equipped with an overflow prevention system meeting the requirements specified in the Cal. Code Regs., section 2635(b)(2)(B) or (C). Suction piping also is exempt from secondary containment requirements if the piping meets the safe suction requirements of the Cal. Code Regs., section 2636(a)(3). There are no components of a UST that are exempt from secondary containment requirements for USTs installed on or after July 1, 2003.

How can it be demonstrated that a UST is compatible with the substance stored as required by H&SC, section 25291(a)(1)?

USTs installed before January 1, 1991 are required to demonstrate compatibility with the stored substance in one of the following ways: 1) an approval for the stored substance by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards (e.g., Underwriters Laboratories (UL) listing/approval); 2) an affirmative statement of compatibility from the manufacturer of the tank that specifies the acceptable concentrations of the stored substance.

USTs installed after January 1, 1991 are required to demonstrate compatibility with the substance stored by being approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. [Cal. Code Regs., §2631(b).] If the approval of the independent testing organization does not include compatibility of the substance stored then additionally, an affirmative statement of compatibility from the manufacturer of the tank that specifies the acceptable concentrations of the stored substance may be used to demonstrate compatibility. [Cal. Code Regs., §2631(j).]

Tanks in which the manufacturer is no longer in business are still required to meet the compatibility requirement of H&SC, section 25291(a)(1) or permanently close the UST on or before December 31, 2025.

As a courtesy, State Water Resources Control Board (State Water Board) staff posts affirmative statements of compatibility from manufacturers of UST components at:
http://www.waterboards.ca.gov/water_issues/programs/ust/alt_comp_opt/soc.shtml.

Does the UL approval of a tank include compatibility of gasoline with ethanol?

It depends. All UL 58 and 1746 listed/approved steel tanks are compatible with blends of ethanol up to 100 percent. On the other hand, not all UL 1316 listed/approved fiber reinforced plastic (FRP) tanks are compatible with ethanol. Only FRP tanks with a UL 1316 listing/approval that explicitly includes a rating for alcohol and/or alcohol mixtures are acceptable to store gasoline with ethanol.

A table has been created to assist in determining what documentation is necessary to demonstrate that an FRP tank is compatible with ethanol and is located at:
http://www.waterboards.ca.gov/ust/tech_notices/ethanol_tank_compatibility_letter.pdf

If a single-walled tank has double-walled piping what needs to be replaced?

Single-walled tanks do not meet the requirements of H&SC, section 25291(a)(1)-(6) and must be permanently closed on or before December 31, 2025. If a single-walled tank is replaced, then the UST system will be subject to H&SC, section 25290.1, including monitoring the entire UST system through the use of vacuum, pressure, or hydrostatic fluid (VPH). VPH subject components include tank, product pipe, fill pipe, vent lines, vapor recovery lines, under dispenser containment, turbine sumps, and transition sumps. Ancillary equipment and UST components that cannot be monitored by the use of VPH must be replaced. Existing double-walled piping that is approved/listed by UL to be monitored by the use of VPH does not have to be replaced as long as VPH monitoring can operate in accordance with H&SC, section 25290.1(e). UL approved/listed pipe can be found on the pipe matrix at:
http://www.waterboards.ca.gov/water_issues/programs/ust/leak_prevention/matrix.shtml.

What does “permanently closed” mean?

H&SC, section 25298 states that no person shall abandon a UST nor permanently close a UST, unless all the requirements of the section are met as applicable. It is not essential that all portions of a UST be permanently closed in the same manner; however, all closure requirements found in H&SC, section 25298 and the Cal. Code Regs., section 2672 must be met.

The residual liquid, solids, or sludges in the tank must be removed and handled as hazardous wastes or recyclable material and the tank must be inerted if it contained a hazardous substance that could produce flammable vapors at standard temperature and pressure. All piping associated with the UST system must 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 permanently closed must be emptied of all contents and capped.

When a tank is disposed of, the owner or operator must document to the UPA that proper disposal of the tank has been completed. Tanks may also be closed in place by being completely filled with an inert solid.

The owner or operator of a UST that will be permanently closed must demonstrate to the satisfaction of the UPA that an unauthorized release has not occurred. This demonstration must be based on soil sample analysis and/or water analysis if water is present in the excavation. The sampling must be performed during or immediately after closure activities and in accordance with the procedure prescribed in the Cal. Code Regs., section 2672(d)(1)-(3). The detection of any reportable unauthorized release shall require compliance with the applicable requirements of articles 5 and 11 of the Cal. Code Regs.

All of the applicable requirements of the Cal. Code Regs., section 2672 must be completed on or before December 31, 2025 to avoid accruing daily penalties beginning January 1, 2026.

If a double-walled tank has single-walled piping what needs to be replaced?

All single-walled piping connected to a double-walled tank installed before July 1, 1987 must be replaced with piping that satisfies the secondary containment and compatibility requirement of H&SC, section 25291(a). Please note, secondary containment requirements do not apply to vapor recovery lines, vent lines, fill pipe, and safe suction piping of USTs installed before July 1, 2003 that meet Cal. Code Regs., section 2636(a). These components are not subject to H&SC, section 25292.05 and are not required to be replaced.

Are vent and fill risers subject to H&SC, section 25292.05?

It depends. Vent and fill risers are exempt from secondary containment requirements if the UST was installed before July 1, 2003 and meets the overfill requirements of the Cal. Code Regs., section 2635(b)(2)(B) or (C). In these cases vent and fill risers do not need to be secondarily contained and can remain single-walled and are not subject to H&SC, section 25292.05.

However, in contrast, USTs installed before July 1, 2003 that do not meet the overfill requirements of the Cal. Code Regs., section 2635(b)(2)(B) or (C) and USTs installed after July 1, 2003 must have secondarily contained vent and fill risers (i.e. contained in a sump).

Are vent or vapor recovery lines subject to H&SC, section 25292.05?

It depends. Vent and vapor recovery lines connected to USTs installed before July 1, 2003 that are designed to prevent and do not hold standing fluid, are not "pipe" and are exempted from meeting the requirements of H&SC, section 25291(a)(1)-(6) and H&SC, section 25292.05.

However, vent and vapor recovery lines connected to USTs installed before July 1, 2003 that are not designed to prevent or that hold standing fluid and USTs installed after July 1, 2003, are "pipe" and subject to the requirements of H&SC, section 25291(a)(1)-(6) and H&SC, section 25292.05.

Is ancillary equipment subject to 25292.05? (e.g., direct bury spill containment and direct bury turbines)

A UST installed before July, 1 2003 with direct bury spill containment on single-walled vent or fill riser is acceptable as long as the UST meets the requirements of the Cal. Code Regs., section 2636(a)(1). If the UST does not meet the requirements of the Cal. Code Regs., section 2636(a)(1) or was installed after July 1, 2003 then the vent and fill riser, along with any spill containment, must be secondarily contained. All turbines, however, must be secondarily contained and continuously monitored because they are connected to single-walled pipe that is subject to the requirements of H&SC, section 25292.05. Although spill containers are almost always required, a double-walled spill container is never required on a tank riser.

Are single-walled tanks that are lined subject to H&SC, section 25292.05?

Yes. H&SC, section 25281(r) defines “single-walled” as constructed with walls made of only one thickness of material. For the purposes of chapter 6.7 of the H&SC, laminated, coated, or clad materials are considered single-walled. Liners and coatings do not meet H&SC, section 25291(a) secondary containment requirements. All single-walled lined tanks must be permanently closed on or before December 31, 2025.

Are single-walled tanks that have rigid or flexible bladders required to permanently close?

Yes. A “bladder system” means a flexible or rigid material which provides primary containment including an interstitial monitoring system designed to be installed inside an existing UST. Bladder products do not provide secondary containment as required by H&SC, section 25291(a). All single-walled tanks with a bladder must be permanently closed on or before December 31, 2025.

Are exempted USTs subject to H&SC, section 25292.05?

No. Exempted USTs meeting sections 25281.6 or 25283.5 are exempt from the requirements of chapter 6.7 of the H&SC, including H&SC, section 25292.05.

How can a tank owner or operator determine if a UST is single-walled?

The type of tank and connected piping can be determined a couple different ways. One is by conducting a review of the UST records on file with the UPA or records uploaded to the California Environmental Reporting System. Another way is by inquiring with the facilities UST designated operator, a UST service technician, or a UST contactor to determine through a visual inspection what type of tank and connected piping is present at the facility.

Can single-walled USTs be placed into temporary closure on or after December 31, 2025?

No. Temporary closure of a UST is allowed only if the owner or operator intends to return the UST to use. Since single-walled components do not meet H&SC, section 25291(a)(1)-(6) the UST is not eligible to be returned to use after December 31, 2025. Therefore, all USTs that are put into temporary closure that do not meet H&SC, section 25291(a)(1)-(6) can return to service before December 31, 2025, but must be permanently closed on or before December 31, 2025.

Is there funding available to owners and operators that must permanently close their single-walled UST?

Yes. Replacing, Removing, or Upgrading Underground Storage Tanks (RUST) grants and loans are available to assist small business UST owners or operators in financing up to 100 percent of the costs necessary to upgrade, remove, or replace project tanks, including corrective actions, to meet applicable local, state, or federal standards, including, but not limited to, any design, construction, monitoring, operation, or maintenance requirements adopted pursuant to H&SC, section 25292.05.

Low-interest loans, for between \$10,000 and \$750,000, are available for a term of 10 or 20 years for the purpose of removing and replacing single-walled USTs. Grants are also available for between \$3,000 and \$70,000 to eligible UST owners or operators. An additional \$140,000 in RUST grant moneys above the \$70,000 maximum is available for remote public fueling stations. Previous grants from RUST are the maximum amount allowed, so plan accordingly. For more information on available funding please visit the RUST Program website at:

http://www.waterboards.ca.gov/water_issues/programs/ustcf/rust.shtml.

Why is it important to permanently close single-walled USTs prior to the deadline?

The deadline for permanent closure of all single-walled USTs is December 31, 2025. Loans and grants are available through the RUST program to assist eligible small businesses to permanently close single-walled USTs and to replace them with double-walled USTs. If eligible for RUST funding, work cannot begin until a grant or loan has been executed by the State Water Board. Loans and grants are limited annually and chances for funding are greater the earlier UST owners or operators apply. In addition, upon permanent closure of a UST, if a release has occurred, the owner or operator may need to undertake corrective action (i.e., investigate and clean up the release). Filing a claim application with the UST Cleanup Fund, completing corrective action, and receiving reimbursement for eligible corrective action costs is a lengthy process. The deadline for submittal of a claim application to the UST Cleanup Fund for reimbursement of eligible costs for corrective action is December 31, 2024. The UST Cleanup Fund is scheduled to sunset on January 1, 2026. Do not delay.

What should be done if a tank lining for a repair is necessary or the 5-year tank lining inspection is due?

If lining a tank for a repair or conducting the internal tank lining inspection to meet the five-year inspection as required pursuant to the Cal. Code Regs., section 2663(h), State Water Board staff recommends replacing the tanks. Owners or operators of tank systems that are not going to perform the required lining inspection must close their systems by the date the lining inspection is due. All single-walled lined tanks must be permanently closed on or before December 31, 2025.

Is there any reason that a single-walled UST would be required to be permanently closed before December 31, 2025?

Yes. The State Water Board was granted the authority by the legislature to adopt regulations to require owners or operators of single-walled USTs to permanently close those USTs before December 31, 2025. More information will be provided if the State Water Board chooses to adopt regulations which would require owners or operators of single-walled USTs to permanently close the USTs before December 31, 2025.

What is the penalty for an owner or operator for not complying with H&SC, section 25292.05?

Pursuant to H&SC, section 25299, the owner or operator of a UST shall be liable for a civil penalty of not less than five hundred dollars (\$500) or more than five thousand dollars (\$5,000) for each UST for each day of violation. Therefore, beginning on January 1, 2026, penalties will accrue for each day that any single-walled UST is not permanently closed. If the State Water Board adopts regulations to require permanent closure of single-walled USTs before December 31, 2025, then penalties will begin to accrue for each day that any single-walled UST is not permanently closed on or before the date specified in the adopted regulation.

Will UST owners or operators be notified by the State Water Board or the UPA?

Yes. Neither the State Water Board, nor the UPA is required to notify single-walled UST owners or operators. However, both the State Water Board and the UPAs will conduct outreach efforts to notify owners or operators of USTs that have single-walled components in order to assist in achieving successful compliance with H&SC, section 25292.05 by the December 31, 2025 deadline. As part of this effort, the State Water Board have sent out letters of notification to UST owners and operators who have been identified by their UPA as having a single-walled UST system. A copy of the letter and other single-walled tank information is accessible at: http://www.waterboards.ca.gov/ust/single_walled

If you have questions regarding the implementation of the UST provisions of SB 445 please contact me at (916) 341-5870 or laura.fisher@waterboards.ca.gov or Cory Hootman at (916) 341-5668 or cory.hootman@waterboards.ca.gov.

Sincerely,



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