

TANK SYSTEM ON-SITE CLEANING REQUIREMENTS

*For use by Unidocs Member Agencies or where approved by your Local Jurisdiction
Authority Cited: California Code of Regulations, Title 22, Div. 4.5, Ch. 32*

A. Scope

This document has been prepared to describe requirements that apply throughout the State of California for on-site cleaning of aboveground and underground hazardous material/waste tank systems to render them non-hazardous. This process must also be followed for any underground storage tank system that is to be closed-in-place. Merely rinsing a tank — for example to lessen the risk of explosion — does not trigger these requirements as long as the tank is managed as hazardous waste [i.e., sent via Uniform Hazardous Waste to a permitted Treatment, Storage, or Disposal Facility (TSDF)].

B. General Information

1. These requirements apply to all on-site cleaning of hazardous material storage tank systems (tanks and piping). They serve as a supplement to requirements specified in the Unidocs Underground Storage Tank System and Sump Closure Requirements (UN-002) and Aboveground Tank Closure Requirements (UN-063) guidance documents. If these cleaning requirements are followed, Sections B-2 and B-3 of the UST closure requirements and Section B-9 of the AGT closure requirements do not apply. Other than those exceptions, all requirements specified in the tank closure guidance documents must be met.
2. **The only tanks that can be cleaned on-site are those where the tank operator has first-hand knowledge of the material last stored in the tank and certifies the identity of the material, or where residuals inside the tank are analyzed by a State-certified analytical laboratory.** Abandoned tanks that are discovered and which do not have enough residuals to be collected and analyzed must be managed as hazardous waste and shipped off-site for recycling or disposal. [22 CCR §67383.3(a)(1)(D)]
3. The following documents shall be submitted to and approved by the appropriate local Unified Program Agency (UPA) before cleaning or cutting work begins (Santa Clara County UPA jurisdiction and contact information is available at www.unidocs.org/members/whoregulateswhat.html): [22 CCR §67383.3(a)(1)]
 - a. A completed Tank System On-Site Cleaning Application; and
 - b. A completed Underground Storage Tank System Closure Permit Application (UN-003) or Aboveground Tank Closure Permit Application (UN-064), depending on the type of tank, along with payment of applicable tank closure permit fees and all required attachments (see tank closure requirements and permit application forms for details); and
 - c. A site-specific Work Plan; and
 - d. A site-specific Health and Safety Plan.
4. Unless the requirements of Section D, below, are met, the cutting of tanks on-site, including tearing tanks open using excavation equipment, is prohibited.
5. Unless shipped on a Uniform Hazardous Waste Manifest, via a licensed hazardous waste hauler, to a TSDF permitted to engage in such operations, tanks shall not be cleaned off-site.
6. All atmosphere testing, cleaning, cutting, and visual inspection activities must be witnessed by an inspector from the local UPA.

C. Cleaning Requirements

1. Tanks shall be cleaned by a vacuum system, along with an appropriate cleaning agent, to remove sludge, loose scale, debris, and rinseate in accordance with one of the following methods: [22 CCR §67383.3(b)]

- a. Recommended Practice for the Closure of Underground Petroleum Storage Tanks, API Publication 1604, Third Edition (March, 1996). American Petroleum Institute, 1220 L Street N.W., Washington DC 20005;
 - b. Safe Entry and Cleaning of Petroleum Storage Tanks, API Publication 2015, (May, 1994). American Petroleum Institute, 1220 L Street N.W., Washington DC 20005;
 - c. Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers Without Entry, NFPA 327, 1993 Edition. National Fire Protection Association.
 - d. Procedures approved by the local UPA.
2. All sludge, loose scale, residue, rinseate, and debris generated during the tank cleaning process shall be managed as hazardous waste. [22 CCR §67383.3(d)]
3. After cleaning, the tank systems shall meet all of the following requirements: [22 CCR §67383.3(e)]
- a. All tanks, piping, and appurtenances shall be free of product, sludge, rinseate, and debris to the extent that no material can be poured or drained from them when held in any orientation (e.g. tilted, inverted, etc.);
 - b. Tanks shall be free of product, sludge, scale, rinseate, and debris, except that residual staining (i.e. light shadows, slight streaks, or minor discolorations) caused by soil or waste, or small amounts of waste in cracks, crevices, and pits may be present. **A thorough visual inspection of the entire tank interior shall be performed** to confirm this;
 - c. If the tank(s) previously contained flammable/combustible material having the potential to generate flammable vapors, the cleaning standard shall be zero percent of the Lower Explosive Limit (LEL) for the material(s) previously held and oxygen concentration equal to that of ambient air (i.e. approximately 20.8%). To confirm this, oxygen and LEL readings, measured at the top, center, and bottom of the tank shall be taken with a properly calibrated combustible gas indicator (CGI). These readings shall be recorded in the Tank Closure Certification form (see below).
4. After completion of the required visual inspection and, if applicable, interior atmosphere readings, the tank shall be certified as non-hazardous by a qualified professional. The following professionals, certified or registered in the State of California, are qualified to certify tanks as meeting Title 22 standards for rendering tanks non-hazardous: [22 CCR §67383.3(f)]
- a. Certified Industrial Hygienist (CIH);
 - b. Certified Safety Professional;
 - c. Certified Marine Chemist;
 - d. Registered Environmental Health Specialist (REHS);
 - e. Registered Professional Engineer (PE);
 - f. Registered Environmental Assessor (REA), Class II;
 - g. Contractor licensed by the Contractor's State License Board (CSLB) who holds a Hazardous Substance Removal Certificate issued by the CSLB.
5. The qualified professional shall prepare a separate Unified Program Consolidated Form (UPCF) Hazardous Waste Tank Closure Certification form to document each tank cleaned and rendered non-hazardous. This form is available at www.unidocs.org. [22 CCR §67383.3(g)]
6. A copy of the Hazardous Waste Tank Closure Certification form shall accompany each tank to the recycling or disposal facility. [22 CCR §67383.3(i)]
7. The qualified professional shall provide copies of the Hazardous Waste Tank Closure Certification form to the following parties: [22 CCR §67383.3(h)]
- a. The local UPA;

- b. The owner and/or operator of the tank system(s);
 - c. The contractor responsible for removal of the tank system(s).
8. If the tank certified as non-hazardous was a UST with a Permit to Operate issued by the local UPA, or was an aboveground tank or unpermitted UST located at a facility required to electronically submit information via the California Environmental Reporting System (CERS) website or an equivalent local UPA electronic reporting portal, the facility shall electronically submit the Hazardous Waste Tank Closure Certification form within 30 days of the date of certification. [22 CCR §67383.3 (h)]

D. Cutting Requirements

The following requirements apply to tanks that previously contained flammable or combustible materials.

1. All cutting activities shall be approved by the local Fire Department.
2. The tank cleaning contractor shall provide, on-site and readily accessible, at least one 40BC rated portable fire extinguisher and a combustible gas indicator (CGI) meter, capable of measuring LEL and oxygen levels, which is properly calibrated on-site.
3. Only non-sparking cold-cutting tools or a non-sparking cold-cutting process shall be used in cutting. [22 CCR §67383.3(c)]
4. Prior to cutting, the interior atmosphere of the tank shall be made safe by the addition of dry ice (carbon dioxide) or other methods approved by the UPA sufficient to achieve an atmosphere of either less than 5% oxygen or less than 20% LEL, measured at the top, center, and bottom of the tank by the CGI meter.

E. Transportation of Uncut Tanks

The following requirements apply to tanks that previously contained flammable or combustible materials.

1. Any cleaned tank that has not been cut on-site, is intended for transportation off-site, and has the potential to generate flammable vapors shall be inerted with a minimum one pound of dry ice per each 45 gallons of tank volume (i.e., 22.2 pounds per 1,000 gallons). [22 CCR §67383.5(a)(1)]
2. Before the tank(s) is/are loaded onto the transport vehicle, oxygen and LEL readings, measured at the top, center, and bottom of the tank shall be taken with a properly calibrated CGI meter. Readings shall be less than 10% oxygen or less than 20% LEL. [22 CCR §67383.5(a)(2)]
3. All openings in the tank shall be plugged except for a 1/8" vent. [22 CCR §67383.5(b)]
4. All cracks, holes, and other damaged sections of the tank(s)/piping shall be plugged. If a release of hazardous material could occur, the tank(s), piping, and appurtenances shall be wrapped in plastic sheeting or another appropriate barrier compatible with and capable of containing a release. If the barrier becomes contaminated, it shall be managed as hazardous waste. [22 CCR §67383.5(c)]