



**OFFICE OF THE FIRE MARSHAL
HAZARDOUS MATERIALS DIVISION
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UNDERGROUND STORAGE TANK REMOVAL PROCEDURES

California Health & Safety Code Section 25404 delegates authority for implementing and enforcing statewide underground storage tank requirements to the local Certified Unified Program Agency (CUPA). In San Bernardino County, the San Bernardino County Fire Department Hazardous Materials Division (Department) is the CUPA.

The following document entitled Closure by Removal outlines permitting and procedural requirements for Underground Storage Tank (UST) owners, operators and contractors who intend to remove UST(s).

Any owner intending to permanently or temporarily close a UST which presently, or in the past has stored hazardous substances, must comply with the following requirements pursuant to Title 2, Division 3, Article 2 of the San Bernardino County Code. Per County Ordinance 3846, "No person shall abandon, close, or remove an underground storage tank, temporarily cease operating an underground storage tank or gather soil and/or water samples for determination of contamination, except with a CUPA permit".

The FY 08/09 removal permit fee is \$496 for the first UST and \$186 for each additional UST (refer to current fee schedule). All monitoring requirements, operating permits and operating fees must be maintained during the removal process.

The State Contractors License Board requires any contractor who installs or removes USTs and/or piping to have the Hazardous Substance Removal Certification "HAZ" and one of the following licenses: General Engineering "A", Plumbing Contractor C-36, or Limited Specialty C61/D-40. Workers Compensation Insurance is also required.

The contractor shall be responsible for ensuring that conditions at the site provide for workplace safety, protection of the environment and integrity of nearby structures.

It is the responsibility of the UST owner or duly authorized representative to notify other governmental agencies that may have applicable permit requirements. This includes, but is not limited to, the following: Local Fire Agency, Local Building Department, and Air Quality Management District. Failure to meet notification and permit requirements will cause the removal to be cancelled.

Regulatory References:

- California Code of Regulations (CCR) Title 23, Division 3, Chapter 16, Article 7, (Underground Storage Tank Closure Requirements) Sections 2670-2672 (General Applicability, Temporary Closure Requirements, Permanent Closure Requirements)
- California Health and Safety Code Section 25298 (Abandonment, Closing, or Temporary Ceasing of Operation of Underground Storage Tank)
- San Bernardino County Code Title 2, Division 3, Article 2 (Underground Storage Tanks CUPA Program Element) Sections 23.07210 – 23.07213 (Temporary Closure, Permanent Closure by Removal, Permanent Closure in Place, Sampling Analysis for Closures)

CLOSURE BY REMOVAL

Permanent closure by removal applies to those Underground Storage Tanks (USTs) in which the storage of hazardous substances has ceased and tanks will not be used within the next twelve (12) consecutive months. An inspector from the San Bernardino County Fire Department Hazardous Materials Division must witness and document the removal. Mandatory soil sampling is required to determine if contamination exists and if further assessment of contamination is necessary.

Permit Application

The time period between cessation of hazardous substance storage and application for temporary or permanent tank closure shall not exceed ninety (90) calendar days. The UST owner, operator or designated representative must complete an Application for Removal of Underground Storage Tank with a brief scope of work, and a facility plot plan. The applicant must pay closure fees and any outstanding fees at the time of application.

Note: The local fire jurisdiction and local Air Quality Management District may have additional requirements.

Scheduling

A UST closure inspection must be scheduled in advance with this Department. For an appointment, call (909) 386-8464.

Tank Cleaning

All residual liquids, solids, or sludge shall be removed and handled according to the provisions in Division 20, Chapter 6.5 of the California Health and Safety Code and Title 22, Chapter 32, Section 67383.1 of the California Code of Regulations. The UST shall be properly cleaned, which requires the pressure washing/rinsing of the UST and removal of the contents via a vacuum type pump system that is designed to safely handle flammable liquids. A California Hazardous Waste Manifest is required indicating the amount of any residual and/or rinsate generated, location and manner of disposal.

Tank Inerting

Flammable vapor must be purged from the UST to prevent an explosion or fire. A Combustible Gas Indicator (CGI), which is properly calibrated, shall be used to measure the concentration of flammable vapor at the top, center and bottom of the UST. The concentration of flammable vapor shall be less than 10% of the Lower Explosive Limit (LEL) for the material that was contained in the UST and must be inerted with a minimum of 22.2 lbs of dry ice per 1,000 gallons of UST capacity. The LEL reading after inerting must be below 2-3% prior to UST removal from the excavation.

Tank Removal and Disposition

For USTs larger than 2,000 gallons, removal of the UST from the excavation and loading onto a truck for transport must be accomplished using a crane. Other equivalent equipment will only be allowed with pre-approval from this Department.

The State of California has determined that USTs used for the storage of any hazardous or flammable substance shall be considered hazardous, even if all contents have been removed. All USTs shall be transported as hazardous waste, accompanied by a California Hazardous Waste Manifest and taken to a licensed Treatment, Storage, and Disposal Facility (TSDF).

The USTs may only be handled as non-hazardous if they are triple rinsed onsite and the rinsate is manifested and hauled to a licensed TSDF. Documentation of proper disposal of the UST is required.

Sampling

The owner/operator must demonstrate to the satisfaction of this Department whether or not an unauthorized release has occurred. Demonstration shall be based on the analytical results of soil samples obtained during closure activities.

It is the responsibility of the owner or operator to conduct or arrange for the soil samples to be collected, analyzed, and for a report of findings to be prepared documenting sample collection and—analysis, and results. It is recommended that owners or operators who are not familiar with the process hire a knowledgeable contractor/consultant. This Department is responsible for regulatory oversight only and will not collect samples on the applicant's behalf.

A minimum of one (1) sample must be taken from the fill end and one (1) sample from the turbine end of the UST. Soil samples shall be collected from at least 2 feet below native soil (not from fill). A separate sample is required at each dispenser, and at every 20 linear feet of piping and/or at each joint, bend or connection. The inspector may require additional sampling, especially if areas of discoloration or odor are noted.

Soil stockpiled from the excavation shall be sampled and analyzed for the constituents of concern (see chart below). The number of samples and specific analysis will be dictated by the disposition of the soil. The inspector may also require additional samples and analyses. Typically, 3 discrete or appropriately composited samples will be required per each 50yd³ stockpiled.

Excavated soil must not be used as backfill unless it can be demonstrated that soil is not contaminated. Typically, Total Petroleum Hydrocarbons (TPH) must not exceed 100 mg/kg with no volatile organic compounds or MTBE detected.

Samples shall be analyzed for all constituents of the previously stored hazardous substances and their breakdown or transformation products. For the most common contents of USTs, the following analyses are typically required:

Material Stored in the UST	Contaminant of Concern	Analytical Method
Gasoline	TPH (C ₅ -C ₁₂) Volatile Organics (to include as a minimum: BTEX, MTBE, and oxygenates) Total Lead ¹	8015M 8260B 6010B or 7421
Diesel	TPH (C ₁₀ -C ₂₄) Volatile Organics (to include as a minimum: BTEX, MTBE, and oxygenates)	8015M 8260B
Waste Oil	TPH (C ₂₄ -C ₄₀) or TRPH Volatile Organics Metals ¹ (CAM17 or 8 RCRA)	8015 Fuel Screen or 418.1 8260B 6010B or 7000 series

¹The analyses for these contaminants shall be run on the sample with the highest TPH concentration. Lead shall be analyzed at all sites dispensing fuel prior to 1992.

Samples shall be prepared, stored, transported, and analyzed by appropriate Environmental Protection Agency methods. A California State-Certified Laboratory must perform the sample analysis.

Detection of any unauthorized release must be reported to this Department within 24 hours. This Department will evaluate all data and determine if any further corrective action is required.

Reporting

Submit a UST closure report within sixty (60) days of the UST removal/soil sampling date to this Department. At a minimum, the report must include a narrative of the removal, a description of the soil sampling, handling, and transport methods, the soil sampling data in table format. The site map must be to scale and identify sampling locations and designations, UST and piping locations, and buildings and/or streets. Attach copies of the laboratory analysis, and chain-of custody, disposal documentation and UST destruction certificate.