

City of San Leandro Environmental Services Section
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UNDERGROUND STORAGE TANK (UST) CLOSURE GUIDANCE

General Information:

California Health and Safety Code §25404 delegates authority to implement and enforce underground storage tank regulations to the local Certified Unified Program Agencies (CUPA). San Leandro's CUPA is the Environmental Services Section.

City permits are coordinated through the City of San Leandro Building & Safety Services Permit Center. Contact the Permit Center at 510-577-3423 or see <http://www.sanleandro.org/depts/cd/bldg/> for more information. A grading permit may be required from the Engineering and Transportation Department, 510-577-3428.

Submit the attached Underground Storage Tank Closure Plan and supplemental questionnaire directly to Environmental Services. The period between cessation of hazardous substance storage and application for closure shall not exceed 90 calendar days. Include a plot plan showing the location of the tanks, buildings, adjacent streets, and a north direction arrow.

Schedule with Environmental Services at least five working days in advance of tank removal and sampling activities to ensure that a CUPA representative is available to be present.

Contractors shall submit information verifying possession of a current State Contractor License (A, B, C-36, or C-61/D-40), a Hazardous Substance Removal Certificate issued by the Contractors State License Board, and City of San Leandro Business License

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. A site-specific Health and Safety Plan shall be maintained onsite during closure activities.

The contractor shall provide a fire extinguisher with a minimum rating of 40BC and a calibrated meter capable of measuring Lower Explosive Limit (LEL) and oxygen.

Tank Removal:

Electrical service to tanks/pumps shall be terminated prior to excavation. Dispensers/pumps and all associated piping shall be removed or emptied and capped if unable to be removed. Plumbing permits may be required.

Hazardous materials shall be removed from tanks and piping prior to tank removal and properly managed. Materials generated from the emptying or rinsing of tanks shall be manifested as hazardous waste.

Contractor shall provide adequate tank removal/lifting equipment to safely remove tanks. Welding, smoking, and tank cutting are prohibited at the tank site. Personnel shall not enter unshored excavations for any purpose.

Prior to inerting tanks formerly containing flammable/combustible liquids with a flash point <140°F, a vent pipe extending at least 12 feet above ground surface must be installed on each tank.

Tanks previously containing flammable/combustible materials shall be made safe for removal from the excavation by the addition of dry ice (solid carbon dioxide), or other method approved by the CUPA. The tank atmosphere must be less than 20% of the LEL and less than 10% oxygen prior to removal. A minimum of 22 pounds of dry ice for each 1,000 gallons of tank volume is required. Tank removal shall occur between 1 – 4 hours from the time the dry ice is introduced.

All openings, other than a 1/8" hole at the top of each tank to allow for venting, shall be capped or plugged immediately after removal. When loading tanks on the highway carrier, position the pressure relief hole at the top of the tank.

Tanks shall be removed from the excavation within 24 hours of removal of backfill. Tanks shall be transported from the site the day they are removed from the ground or they may be required to be placed back into the excavation. If an excavation is to remain open after the contractor leaves the site, the excavation perimeter shall be fenced 6' high or posted with a 24-hour guard.

Excavated soil shall be stored on bermed polypropylene at the time of tank removal and covered. Excavated soil shall not be returned to the excavation without approval from Environmental Services or the Alameda County Local Oversight Program (LOP). The excavation may be filled prior to receipt of sample results if clean material is provided.

Excavated tanks and piping are hazardous waste and shall be manifested and transported by a licensed hazardous waste transporter to a permitted hazardous waste facility. Alternately, tanks may be cleaned onsite and certified in accordance with California Code of Regulations, Title 22, Division 4.5, Chapter 32. §67383.3. Cleaned tanks must be certified clean by a licensed professional using the attached Hazardous Waste Tank Closure Certification. Tanks closed in place also shall be certified.

For in-place tank closure, submit a work plan indicating the locations and descriptions of the proposed soil borings, the number and type of samples to be collected, the tank cleaning protocol, and the material to be used for filling the tank(s). The work plan must be signed by a registered geologist or other approved professional.

Sampling and Analysis:

See Tables 1 and 2 in this guidance for sampling protocol. Additional samples should be collected under dispenser(s).

Soil/groundwater samples shall be collected the day of tank removal and properly preserved, handled under chain-of-custody, and analyzed by a State-certified laboratory. Owners or operators of a UST closed per 23 CCR 2672 shall maintain the analytical results of all soil and groundwater samples for at least 36 months after closure.

A reportable unauthorized release must be reported to the CUPA and to the Office of Emergency Services within 24 hours after the release has been detected. An unauthorized release is determined by the presence of obvious contamination at the time of tank removal or based on soil samples collected during tank removal and/or water analysis if water is present in the excavation.

In the event contamination resulting from a UST system leak is identified, it is the responsibility of the owner or operator to submit a "UST Unauthorized Release (Leak) / Contamination Site Report" to the Regional Water Quality Control Board. The form is available at http://www.waterboards.ca.gov/water_issues/programs/ust/forms/.

Requirements to Obtain Final Tank System Closure:

Submit a report to the CUPA documenting the tank closure activities within 30 days of closure of the tank(s). Include a summary of tank closure activities, site map with tank and piping locations, sampling locations and depths, laboratory analytical results, chain of custody, and copies of any hazardous waste manifests for tanks/piping, rinseate, and/or tank disposal certificates.

UST Owner/Operator must provide "Date UST Permanently Closed" for each tank via the California Environmental Reporting System (CERS) at <http://cers.calepa.ca.gov> and update the site's Hazardous Materials Business Plan as needed to reflect applicable changes.

More information on permanent closure requirements may be found at Title 23 of the California Code of Regulations, §2672 and California Health and Safety Code §25298.

UNDERGROUND STORAGE TANK CLOSURE PLAN

1. Facility Name _____ Address _____
 Contact Person _____ Phone # _____
 CERS ID # _____ EPA ID # _____
2. Contractor _____ License Type(s)/# _____
 Address _____
 Contact Person _____ Phone # _____
3. Sampling to be performed by _____ Phone # _____
4. Laboratory services to be provided by _____
 ELAP Certificate # _____ Phone # _____
5. Tank Hauler _____ EPA ID # _____
 Address: _____ Phone # _____
 Destination of Tank(s)/Piping _____
6. Method of inerting tank(s) _____
7. Type of LEL/O2 gas meter to be provided _____

8. Tanks to be removed (R)/closed in place (C) (attach additional sheets if needed):

| | Size | Contents | Material of Construction | Install date | Sample Analysis/Method | R | C |
|--------|------|----------|--------------------------|--------------|------------------------|---|---|
| Tank 1 | | | | | | | |
| Tank 2 | | | | | | | |
| Tank 3 | | | | | | | |
| Tank 4 | | | | | | | |
| Piping | | | | | | | |

I acknowledge receipt and agree to comply with the City of San Leandro underground storage tank closure guidance. I declare under penalty of perjury that the information provided is true and correct to the best of my knowledge.

Company Name _____ Address _____

Applicant's Signature _____ Date _____

Environmental Services Representative: _____ Date _____

Underground Storage Tank Removal Supplemental Questionnaire

1. Is the removal part of a new subdivision? Yes () No ()

2. Is the site located within a 100-year or a 500-year Flood Zone as shown on the FEMA "Flood Insurance Rate Map" for San Leandro?
No () 100-year () 500-year ()

3. Estimated ground surface area to be excavated? _____

4. Yards of Cut: _____ Yards of Fill: _____ Total Yards Moved: _____

5. List public streets proposed to be traveled for export hauling: _____

6. Will the excavation be within 15 ft of a property line? Yes () No ()

7. Will the excavation be within 15 ft of a building? Yes () No ()

Table #1

**Underground Storage Tank (UST)
Permanent Closure Sampling
23 CCR §2672(d)**

| Component | Removal §2672(b) | Closure in place §2672(c) |
|---|--|--|
| UST | A minimum of TWO samples at each end of the tank a minimum of two feet into native soil. ¹ §2672(d)(1) | A minimum of ONE sample below the midpoint of the tank using a slant boring a minimum of two feet into native soil. §2672(d)(2) |
| Piping | ONE sample for each 20 linear-feet of trench. §2672(d)(1) | ONE sample for each 20 linear-feet of trench. ² §2672(d)(1) |
| If groundwater is observed in the excavation | A minimum of ONE sample at the soil/groundwater interface | A minimum of ONE sample at the soil/groundwater interface |

¹ Sample any areas of obvious contamination observed.

² All piping associated with the underground storage tank shall be removed and disposed 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 closed shall be emptied of all contents and capped. § 2672(c)(3)

**Table #2 Recommended Minimum Verification Analyses
for Underground Storage Tank Investigations**

(See explanation on following page)

| Tank Contents (Carbon Range) | Gasoline by 8015M or 8260B | Diesel by 8015M | BTEX by 8021B or 8260B | VOCs by 8260B ⁽¹⁾ | Semi-VOCs by 8270C ⁽²⁾ | Oil & Grease by 1664A | PCBs by 8082 | Total Lead by 7421 | Title 22 Metals ⁽³⁾ |
|---|----------------------------|-----------------|------------------------|------------------------------|-----------------------------------|-----------------------|--------------|--------------------|--------------------------------|
| Unknown Fuel (C4-36) | X | X | | X | | | | X | |
| Gasoline (C4-C20) | X | | | X | | | | X | |
| Diesel (C10-C36) | | X | X | X | | | | | |
| Jet Fuel/Kerosene (C9-C20) | | X | X | | | | | | |
| Heating Oil (C10-C32) | | X | X | | | | | | |
| Stoddard Solvent (C8-C20) (Non-Chlorinated) | | X | | X | | | | | |
| Chlorinated Solvents | | | | X | X | | | | |
| Waste Oil or Unknown Contents | X | X | | X | X | X | X | | X |

Notes:

1. EPA Method 8260B analyses must include all analytes listed in the method plus fuel oxygenates methyl-tertiary-butyl ether (MTBE), diisopropyl ether (DIPE), ethyl-tertiary butyl ether (EtBE), tertiary-amyl-methyl ether (TAME), tertiary-butanol (TBA), methanol and ethanol and fuel additives 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB or 1,2-dibromoethane).
2. If pentachlorophenol (PCP) is identified, analyze the soil and/or water sample for dioxins and furans by EPA Method 8290 and pesticides by EPA Method 8081A.
3. Method 6010B may be used for all but the following metals for which individual AA methods are required: Antimony & Arsenic by 7062, Cadmium by 7131A, Lead by 7421, Mercury by 7471A, Nickel by 7521, Selenium by 7742, and Thallium by 7841.
4. Non-proprietary, performance-based analytical methods may be used with approval of Regional Board staff.

Explanation for Table #2: Minimum Verification Analyses

1. As other methodologies are developed and accepted by the USEPA and the DHS, they may also be used if they have equal or better performance than the listed methods.
2. For drinking water sources, USEPA and DHS recommend that the 500 series methods for volatile organics be used in preference to the 8000-wastewater series methods due to lower detection limits and superior laboratory QA/QC. The 500 series currently comparable to Method 8260B is Method 524.2.
3. Appropriate analyses are to be used for detection of leaking tank contents. For example, there may be multiple fuels dispensed from an individual tank over its active life. Regulators must determine if the UST was used for multiple fuels and require the appropriate analyses.
4. Total Petroleum Hydrocarbons as gasoline (TPHg) and diesel (TPHd) ranges (volatile and extractable, respectively) are to be analyzed and characterized by GC/FID with a fused capillary column and prepared by EPA method 5030 (purge and trap) for volatile hydrocarbons, or extracted by sonication using Method 3550 for extractable hydrocarbons. Fused capillary columns are preferred to packed columns; a packed column may be used as a "first cut" with "dirty" samples or once the hydrocarbons have been characterized and proper QA/QC is followed.
5. Silica gel cleanup of TPHg and TPHd samples to remove weathered hydrocarbons or breakdown products is not acceptable, as these compounds removed may contribute to impairment of beneficial uses of water through adverse taste and odor and/or toxicity. If natural background compounds are suspected to be contributing to high TPH concentrations that are not associated with the petroleum hydrocarbon release, comparison with samples from background locations, out of the influence of the petroleum hydrocarbon release, may be used to justify adjusting TPH concentrations.
6. Tetraethyl lead analysis may be requested if the total lead concentration exceeds the naturally occurring (or background) concentration for lead.
7. Oil and Grease (O & G) analysis may be requested when heavy, straight chain hydrocarbons are present. As of 1 January 2002, USEPA requires O & G analysis by EPA Method 1664A.
8. Practical Quantitation Limits (PQLs), also called Reporting Limits by many laboratories, are influenced by analytical method selection, matrix problems and laboratory QA/QC procedures. The PQLs shall be equal to or lower than the detection limits (DLRs) for purposes of reporting published by DHS (<http://dhs.ca.gov/ps/dsdwem/chemicals/DLR/dlrindex.htm>).
9. PQL chain-of-custody and the signed laboratory data sheets are to be submitted containing the laboratory's assessment of the condition of the samples on receipt including temperature, suitable container type, air bubbles present/absent in VOA bottles, proper preservation, appropriate holding time, etc. The sheets must also include the dates sampled, submitted, prepared for analysis, and analyzed.
10. PEAKS THAT DO NOT CONFORM to the standards must be reported by the laboratories, including any unknown complex mixtures that elute at times which vary from the standards. These mixtures may not compare to the standards and may not be readily identified; however, they are to be reported. At the discretion of the LIA or the Regional Board the following information is to be contained in the laboratory report:
 - The relative retention time for the unknown peak(s) relative to the reference peak in the standard;
 - Copies of the chromatogram(s);
 - Type of column used;
 - Initial temperature;
 - Temperature program in degrees Celsius per minute; and
 - Final temperature.

Hazardous Waste Tank Closure Certification

Complete and submit this page prior to initiating any cleaning, cutting, dismantling, or excavation of a tank system that meets the conditions below:

- Any tank system that previously held a hazardous material or a hazardous waste, that is identified as a hazardous waste, and that is destined to be disposed, reclaimed or closed in place.
- This does not apply to tank systems regulated under a hazardous waste facility permit, other than permit by rule (PBR), or to tank systems regulated under a grant of interim status, nor to a tank system or any portion thereof, that meets the definition of scrap metal in 22 CCR §66260.10 and is excluded from regulation pursuant to 22 CCR §66261.6(a)(3)(B).

Refer to 22 CCR §67383.3 and 23 CCR §2672 for disposal requirements for tank systems.

(Note: the numbering of the instructions follows the data element numbers that are on the UPCF pages. These data element numbers are used for electronic submission and are the same as the numbering used in 27 CCR, Appendix C, the Business Section of the Unified Program Data Dictionary.)

Please number all pages of your submittal. This helps your CUPA or local agency identify whether the submittal is complete and if any pages are separated.

1. FACILITY ID NUMBER - Leave this blank. This number is assigned by the CUPA. This is the unique number which identifies your facility.

3. BUSINESS NAME - Enter the full legal name of the business.

740. TANK OWNER NAME - Complete items 740-744, unless all items are the same as the Business Owner
741. TANK OWNER ADDRESS information (items 111-116) on the Business Owner/Operator Identification page
742. TANK OWNER CITY (OES Form 2730). If the same, write "SAME AS SITE" across this section
743. TANK OWNER STATE
744. TANK OWNER ZIP CODE

745. TANK ID NUMBER 1-3 - Enter up to three owner's tank ID numbers. This is a unique number used by the owner to identify the tank. If more than three tanks are being closed, complete additional copies of this page. (Enter additional tank numbers in 748 and 751.)

746. CONCENTRATION OF FLAMMABLE VAPOR 1-3 - Enter three interior flammable vapor levels for each tank being closed, taken at the top, center, and bottom of the tank. (For more than one tank, enter additional tank readings in 749 and 752.)

747. CONCENTRATION OF OXYGEN 1-3 - Enter three interior oxygen levels for each tank being closed, taken at the top, center, and bottom of the tank. (For more than one tank, enter additional tank readings in 750 and 753).

SIGNATURE - The business owner or officer of the company who is authorized to make decisions for the facility and who has operational control, shall sign in the space provided.

754. CERTIFIER NAME - Enter the full printed name of the person signing the page.

755. CERTIFIER TITLE - Enter the title of the person signing the page.

756. CERTIFIER ADDRESS - Enter the address of the person signing the page.

757. CERTIFIER CITY - Enter the city for the signer's address.

758. CERTIFIER PHONE - Enter the phone number for the person signing the page.

759. DATE CERTIFIED - Enter the date that the document was signed. Enter the time that the readings were taken.

760. CERTIFIER REPRESENTS LOCAL AGENCY - Check "Yes" if the person certifying the tank is a representative of the CUPA, authorized agency, or LIA, check "No" if not.

761. NAME OF LOCAL AGENCY - Enter the name of the local agency represented by the person certifying the tank.

762. AFFILIATION OF CERTIFYING PERSON - Check the certification, license, or organization which the certifier holds or to which the certifying person belongs, if not a CUPA/ LIA.

763. TANK HELD FLAMMABLE OR COMBUSTIBLE MATERIALS - Check "Yes" if the tank held flammable or combustible materials, check "No" if not.

764. MANAGEMENT INSTRUCTIONS - Provide tank management instructions to the scrap dealer, disposal facility, etc., in this space.