COUNTY OF SAN LUIS OBISPO HEALTH AGENCY
PUBLIC HEALTH DEPARTMENT
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UNDERGROUND STORAGE TANK (UST) CLOSURES

PERMIT PROCESS

Closure of a UST for the storage of hazardous materials generally requires a permit issued by Environmental Health Services.

There are two methods of permanent closure, which include tank removal and tank closure in place. Closure by removal will generally be required unless the removal might cause damage to an adjacent structure or removal is otherwise impractical.

Another closure method is temporary closure. This method applies to a UST in which the storage of hazardous substance has ceased, but the UST will again be used for the storage of a hazardous substance within the next 12 consecutive months. At the end of 12 consecutive months during which the UST is temporarily closed, Environmental Health Services may approve an extension of the temporary closure period for a maximum period of up to 12 months. Before an extension may be granted a site assessment must be completed consisting of sampling under tanks, piping and dispensers pursuant to California Code of Regulations, Title 23, Section 2672(d).

APPLICATION

Application begins by completing and filing an Application for Closure Permit accompanied by the appropriate permit fee.

The applicant must also contact other agencies having jurisdiction, such as the local fire and building departments, regarding compliance with their permitting requirements and regulations.

APPLICANT

Contractors or tank owners may file an application for the closure of a UST system. An application cannot be approved, or permit issued until a closure contractor has been approved.

The applicant must provide proof that the closure contractor possesses a valid license issued by the Contractor's State License Board with a UST Closures Hazardous Substance Certification abbreviated as "HAZ" on the license. Licenses issued prior to 1992 may be approved if they are Class A or the grandfathered Class C-61/D-40. License classes are included in the State Water Board document LG-48-5. **The above referenced licenses are acceptable provided they have the Hazardous Substance Certification.**

The applicant must provide information on how the required sampling will be accomplished. Contractors must hire a third-party consultant to take samples. A state certified laboratory must be used to analyze samples.

The applicant must provide information regarding the cleaning and disposition of the tank(s). This information must include whether the tank will be cleaned onsite and hauled non-hazardous or hauled as a hazardous waste for offsite cleaning. Information must identify an approved tank disposal facility and a certification of tank destruction must be provided.

PERMIT

A closure permit does not supersede the requirements of Uniform Fire and Building Code permits required by the local agencies having jurisdiction. Closure application approval and permit issuance is coordinated with other local oversight agencies.

A permit may be issued if Environmental Health Services is confident that the contractor possesses the necessary qualifications and that the UST closure is not opposed by other local agencies having jurisdiction. If permits expire prior to the start of the closure project, the permit can be reissued for reasonable cause upon written request.

CLOSURE PROCESS

During the closure process there are one or more inspections conducted by Environmental Health Services. Contractors are required by permit to provide at least a 48-hour notice before the time of the requested inspection. Upon contractor's notification, the closure is assigned to the appropriate staff inspector.

The regulations governing excavation and operation of equipment are primarily enforced by Cal-OSHA. Unsafe working conditions will be brought to the contractor's attention and referred to Cal-OSHA if warranted. Regulations governing fire safety are primarily enforced by the local fire agency. Unsafe fire conditions will be brought to the contractor's attention and referred to the local fire agency in an expeditious manner.

REMOVAL CLOSURES

The contractor must not remove the tank from the excavation until the inspector has arrived.

There are two options for Removal Closure: 1. UST cleaned on-site and certified non-hazardous or 2. Handled as a hazardous waste.

1. UST CLEANED ON SITE:
Pursuant to California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 20, Article 1: A workplan must be provided to document compliance with CCR 67383.3. (attached) This workplan must document all compliant decontamination procedures, permitted recycling facility and employee training documentation. If the tank is cleaned onsite, the tank must be rinsed until clean with a mild solution of soap and water or hot water. A vacuum tanker truck is required to collect the rinsate for treatment or disposal at an approved offsite facility. The inspector should verify that the vacuum truck firm is currently registered as a hazardous waste hauler and that the rinsate is transported under manifest to an approved facility. The inspector will verify the certification has been completed pursuant to CCR 67383.3(e) and visually inspect the adequacy of cleaning. This is done by viewing the tank interior using an explosion proof light (a mirror works well when sunlight is present) to determine if the residue has been substantially removed.

The contractor must have a functional, recently calibrated gas detector on site capable of reading the lower explosive limit (LEL) and oxygen level percentage. The inspector will verify that explosive vapors have been purged from the tank by verifying the detector reading at the bottom, middle and upper portions inside the UST. The tank should not contain dry ice at this time because the dry ice may interfere with the LEL reading. To inert the tank and prevent explosive vapors from reforming, dry ice is placed in the tank. Twenty-five (25) pounds of dry ice for each 1000 gallons of tank capacity is required. Nitrogen or carbon dioxide gas may also be allowed in place of dry ice for

inerting tanks. Whichever inerting substance is used, the inspector must verify that the oxygen level in the tank is less than 5 percent at the bottom, middle and upper inside of the tank.

2. UST NOT CLEANED ON SITE HANDLED AS A HAZARDOUS WASTE: Pursuant to California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 20, Article 1: A workplan must be provided to document compliance with CCR 67383.3 (attached). This workplan must document all compliant decontamination procedures, permitted disposal facility and employee training documentation. The above cleaning procedure is not needed if the tank is to be hauled as hazardous waste under manifest by a licensed hazardous waste hauler. In this case the tank must all fuel removed and be inerted with dry ice or an inert gas, as explained above, and the oxygen level in the tank must be less than 5 percent. The tank is inerted to ensure that the tank can be removed from the excavation and hauled safely to an approved hazardous waste disposal facility.

TO BE COMPLETED FOR OPTION 1 OR 2: After inerting, all openings (bungs) in the tank must be closed except for a single 1/8 inch opening, which will allow the tank to vent. Adequate equipment must be present to lift the tank from the excavation. The tank must never be dragged in contact with the ground. The contractor will be requested to spray paint a tracking number on each removed tank. This number is commonly the closure permit number.

After the tank is removed from the excavation, sampling can begin. The inspector will provide direction to the person collecting samples as to the appropriate sampling location. The purpose of sampling is to determine if a release from the tank or piping system has caused contamination.

For tanks less than 1000 gallons, one sample is required from beneath the tank at either the middle or near the fill end of the tank, 2 feet below the level where native soil is first encountered. Any other areas of the excavation that show evidence of possible contamination should also be sampled. Tank capacities of more than 1000 gallons require at least 2 samples taken 2 feet deep in native soil beneath each end of the tank, usually 3 to 4 feet in from each end of the tank.
Other sample locations are the piping trench and the area under the dispensers. After removal of the piping and dispenser islands, samples will be taken under dispenser islands and under approximately each 20 lineal feet of the piping trench. Since most leaks in piping occur at the unions or joints and not along the unjointed portions, sampling below the piping will focus on the areas where the unions or joints were previously located. Samples under piping and dispensers are usually collected 2 feet deep in the native soil. Generally, all piping is required to be removed for disposal.

CLOSURE IN PLACE

Closure of a UST in place is often performed when removal of a UST could threaten an adjacent structure or removal is otherwise impractical.

The closure process usually begins by slant boring beneath the tank. For tanks less than 1000 gallons one sample is required from native soil beneath either the middle or near the fill end of the tank. For tanks larger than 1000 gallons at least two samples are required from native soil beneath each end of the tank, usually 3 to 4 feet in from each end of the tank.

Another approved sampling method includes boring or trenching vertically on each long dimensional side of the tank instead of slant boring beneath the tank. Soil samples are collected from beneath the tank, 2 feet below the level where native soil is first encountered.

In borings or trenches where groundwater is encountered, sampling of soil from the boring in the capillary fringe or in the trench wall immediately above the water level is advised.

Sampling under UST piping and dispensers is performed in the same manner as described in the REMOVAL CLOSURE section. Generally, all piping is required to be removed for disposal. However, where piping removal may cause excessive damage to structures, piping may be cleaned and filled with wet cement slurry as described below.

If soil and/or groundwater samples confirm that significant contamination is present the tank will likely have to be removed in order to remove or remediate the contamination.

Closure in place continues by exposing the tank openings and the tank is cleaned as described in the REMOVAL CLOSURE section. No inerting is required. The tank is then filled with a wet concrete slurry (usually 2 bags of cement per cubic yard of sand).

Care must be taken to ensure that no bridging or voids occur and that the tank is completely filled to the top openings. The tank excavation may be backfilled once the tank has been filled with slurry.

TEMPORARY CLOSURE

The temporary closure process begins with cleaning and inerting of the tank as described in the REMOVAL CLOSURE section and the inspection procedures in that section also apply to temporary closure. After cleaning and inerting of the tank and cleaning of any associated product piping all tank fill and access locations and piping, except for required vent piping, must be sealed using locking caps or concrete plugs. Power service must be disconnected to any turbine pumps or dispensers but left connected to any corrosion protection system.

The tank must be inspected by the owner or operator at least once every 3 months to verify that the temporary closure measures are still in place.

At the end of a temporary closure period exceeding 12 months, including any extension granted, the owner may reuse the tank only if the tank meets the requirements for a new tank or the tank is upgraded.

SAMPLE TESTING

A copy of the report prepared by the inspector during the closure inspection should sufficiently document the tank closure, describe the sampling locations and direct the contractor or consultant on sample testing. Samples of soil and groundwater shall be analyzed according to current EPA protocols for all products that the tank once held as follows:

1. Gasoline - analyze for TPH as gasoline BTEX, MTBE, TAME, TBA, DIPE, ETBE with EPA 8260 GCMS combination. If a tank was used to store leaded gasoline or gasoline, additional analysis for lead (EPA 6010, 7420 or 7421) may be required.

2. Diesel - analyze for TPH as diesel (EPA 8015-M or 8270 GCMS). If the sample significantly exceeds the State Action Level for TPH, additional analysis for PAH's (EPA 8270 or 8310) may be required.

3. Waste Oil - analyze for TPH as oil and grease (EPA 8270, C10-C40). If the sample significantly exceeds the State Action Level for TPH, additional analysis for PCB's (EPA 8080) or chlorinated hydrocarbons (EPA 8010, 8240 or 8260) may be required.