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## **COUNTY OF KINGS**

## **DEPARTMENT OF PUBLIC HEALTH**

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### **GUIDELINES FOR PERMANENT CLOSURE OF UNDERGROUND STORAGE TANKS**

#### **GENERAL CRITERIA**

It is the responsibility of the owner of the underground storage tank (UST) to ensure that the closure process is completed in a lawful manner. Permanent closure requirements can be found in Title 23, California Code of Regulations (CCR), Division 3, Chapter 16, Article 7, and in Title 22, CCR, Division 4.5, Chapter 20, Article 1. In most cases, the owner will retain the services of a qualified and licensed contractor to perform all work at the site.

The State of California Contractors Licensing Board establishes minimum criteria for the removal or repair of UST's. Effective January 1, 1992, all contractors bidding on or performing the removal of UST's must hold the *Hazardous Substance Removal Certification* issued by the Contractors State License Board. Under current Board policy, only those contractors holding one of the following classifications are properly licensed to contract for the installation and/or removal of UST's:

- *Plumbing Contractors (C-36)* - Plumbing contractors may install any UST that provides a service to a building. Any other type of UST may only be installed by a General Engineering Contractor (A).
- *Limited Specialty Contractor (C-61 D-40)* - Service Station Equipment contractors may install fuel UST's at service stations or any other site up to a capacity of 20,000 gallons.
- *General Engineering Contractor (A)* - General engineering contractors may install or remove UST's for any purpose whatsoever at any location.
- *General Building Contractor (B)* - General building contractors may install or remove UST's only if such work is performed under contract to construct or remodel a building that houses people, animals or chattels, and the work involves the use of three or more unrelated trades.

All questions on this issue should be directed to the licensing staff of the Contractors State License Board at (916) 255-3900, P.O. Box 26000, Sacramento, CA.

Site security must be maintained during the removal process. Excavations opened during or after the UST removal operations shall be safeguarded by fencing until backfilled.

It is the responsibility of the contractor to ensure that all work is performed in a safe manner. All contractors must have an established safety program including a site specific safety plan during all work. All contractors performing work must implement all safety standards established by the State of California, Department of Industrial Relations, Occupational Safety and Health Administration (Cal OSHA). For more information and details regarding Specific Safety Orders, contact Cal OSHA Consultation at (559) 454-1295.

## **OBTAINING PERMITS AND NOTIFICATION REQUIREMENTS**

Prior to conducting activities associated with the closure of an UST, a completed *Application for Authority to Abandon Underground Storage Tanks* form must be received and approved by the local Certified Unified Program Agency (CUPA). The local CUPA for Kings County is the Division of Environmental Health Services. All applicable local UST fees (if not already current) must be paid prior to approval of the form. Once reviewed and approved by the CUPA, a copy of the completed Authority-to-Abandon form will be issued to the owner or his/her representative. The approved form is your permit to begin closure operations.

After obtaining an approved Authority-to-Abandon, an appointment must be scheduled with the CUPA for inspection of the removal process. The appointment must be made at least 48 hours in advance of the start of work at the site.

## **TANK CLEANING & DISPOSAL**

All UST's which contained hazardous materials are considered hazardous wastes. In order to recycle a tank or dispose of it at a non-hazardous disposal site, the tank must be decontaminated through a prescribed cleaning process. A *Hazardous Waste Tank Closure Certification* form must be completed to document the cleaning process and final disposal of the tank and a copy of the completed form sent to the CUPA. The contents and rinsate removed from a tank and any tank which is not decontaminated are considered to be hazardous wastes. They must be transported under manifest by a registered hazardous waste hauler to a State permitted hazardous waste treatment, storage and disposal facility (TSDF).

**Disposal Option 1:** Decontamination and recycling for non-hazardous disposal.

1. All contents must be drained from the piping into the tank and the tank contents must be removed and disposed of properly.
2. The interior of the tank must be cleaned using a high pressure washer and an approved detergent if necessary.
3. All sludge, residue and rinsate must be removed from the tank and disposed of properly (as a hazardous waste under manifest).
4. Immediately after cleaning the interior of the tank, it must read no greater than 5% of the lower explosive limit (LEL) on a properly calibrated combustible gas meter. It is the responsibility of the contractor to make this determination.
5. If the tank previously contained a flammable liquid, prior to removal, the tank must be inerted by displacing the oxygen with an inert gas such as carbon dioxide or nitrogen.

- a. A minimum of 22.2 pounds of dry ice per 1,000 gallons tank capacity shall be used to inert the tank.
  - b. If a liquid or gas inerting agent is used, the dispensing device must be bonded to the tank.
  - c. The oxygen level inside the tank must be measured at below 10% after inerting, as demonstrated by the contractor, prior to removal.
6. After the tank has been inerted and before it is removed from the excavation, all accessible holes into the tank shall be capped or plugged. One plug should have a 1/8 inch diameter vent hole to prevent the tank from being subjected to excessive differential pressure caused by temperature changes. The tank should be positioned with this vent plug on top of the tank during subsequent transport and storage. Screwed (boiler) plugs can be used to plug any corrosion holes in the tank shell.

**Disposal Option 2: Hazardous waste disposal**

1. Prior to removal, the UST must be inerted by displacement using an inert gas such as carbon dioxide. The oxygen level must be below 10% after inerting as demonstrated by the contractor.
2. Tanks which have not been properly decontaminated must be transported under a State of California hazardous waste manifest to a State-permitted TSDF. Contact the Department of Toxic Substances Control (DTSC) Region 1 District Office at (559) 927-3901 to obtain information on permitted facilities.

The responsibility for determining if a waste is non-hazardous remains with the generator of the waste. Some companies may accept tanks for reconditioning and reuse or recycling. Under no circumstances should an UST which previously stored a hazardous material be used for storing potable water or foodstuffs. As a protection from future liability, the contractor should obtain assurance that the final destination for the UST is in conformance with land use regulations.

If the UST is destined for a specific reuse, this Department must be notified of the following in writing within 30 days:

1. The name of the new owner and new operator of the UST.
2. The location of use and the nature of use of the UST.

**SOIL SAMPLING PROCEDURES**

Upon removal of the UST and associated piping, soil samples must be obtained and analyzed to demonstrate to the local agency that no unauthorized release has occurred. In addition, a groundwater sample must be obtained and analyzed if water is present in the excavation. The number and location of the samples as well as the sampling protocol must be approved by this Department.

General soil sampling procedures are as follows:

1. All soil samples at tank removal sites shall be taken from the backhoe bucket, unless the excavation has been safely graded or shored.
2. The person performing the soil sampling shall be prepared to obtain samples using a hand auger or similar equipment if deemed necessary in piping runs or under fuel dispensers.

3. Each sample container opening shall be covered with aluminum foil or capped with polyethylene lids, taped, labeled and sealed with custody seals.
4. Samples must be stored and transported in an ice chest and kept at 4°C or colder until delivered to the laboratory. All samples must be delivered to the lab as soon as possible and no later than 48 hours after sampling.
5. All samples must be accompanied by an approved chain-of-custody form.
6. All samples must be taken a minimum of 2 feet into native soil under tanks, piping and dispensers as directed by the CUPA.

**Number and Location of Samples:**

In general, the minimum number of soil samples required will be based upon the size of the tank being removed and the length of piping associated with that tank. All piping must be exposed and prepared for removal unless otherwise approved by the CUPA.

**The following criteria apply:**

Tank Size	Minimum # of Samples	Location of Samples
Less than 5,000 Gallons	One per Tank	Fill or pump end
5,000 - 12,000 Gallons	Two per Tank	One on each end
Over 12,000 Gallons	Three or more per Tank	Ends & middle of Tank
Piping	One	Every 20 linear feet

All samples must be analyzed by a laboratory which has been certified by the State of California, Department of Health Services, Division of Laboratories for the method of analysis requested. The specific analysis requested is dependent upon the product that was stored in the UST and will be resolved at the time the Authority to Abandon form is approved by the CUPA.

**GUIDELINES FOR UST CLOSURE IN PLACE**

UST's which have been approved to be closed in place shall meet the following requirements:

1. All liquids, solids, or sludges must be removed from the tank and handled as hazardous wastes or recyclable materials. The tank need not be inerted unless it becomes necessary to cut openings in the tank top to facilitate filling. A *Hazardous Waste Tank Closure Certification* form must be completed and returned to the CUPA to document this procedure.
2. All piping associated with the UST shall be removed and disposed of unless removal might damage structures or other pipes which are still being used and are in the same trench, in which case the piping to be closed shall be emptied and capped.
3. It must be demonstrated that no significant soil or groundwater contamination exists due to an unauthorized release. The soil sampling procedures described on pages 4 and 5 must be followed except that soil samples may be taken by utilizing a slant boring (mechanical or manual) as directed by this Department. If the depth to groundwater is less than 20 feet, a groundwater monitoring well shall be installed adjacent to the tank in the verified downgradient direction.

4. If the soil and/or groundwater sample results verify that no significant unauthorized release has occurred, the abandonment may be completed by filling the tank with an inert material such as sand or concrete slurry, and backfilling to grade level with clean fill dirt.

## **PAPERWORK AND CLOSURE DOCUMENTATION**

All of the following must be submitted to the Kings County Health Department, Division of Environmental Health Services **within 30 days** of the UST removal:

1. Copies of the analytical results from all samples taken as part of the UST closure.
2. Copies of the chain-of-custody form which accompanied the samples to the lab.
3. Copies of any reports generated by consultants or lab personnel regarding location of tanks, depth and location of samples, etc.
4. Documentation of proper final disposal of the tanks, including a copy of the completed *Hazardous Waste Tank Closure Certification* form.
5. Waste manifests generated as a result of transport and disposal of rinsate and/or tanks.

Following the completed closure of all UST's at the site, receipt of all applicable closure documentation from the tank owner, and based upon verification that no significant release of hazardous materials has occurred, a final closure letter will be issued to the owner by the CUPA as documentation that all closure requirements have been satisfactorily met.

:H/CUPA/CUPA Programs/Underground Storage Tanks/Closure/UST Closure Guide closure/