

## UNDERGROUND STORAGE TANKS

### CONDITIONS

FOR ABANDONMENT/CLOSURE/EXCAVATION,  
REMOVAL, AND DISPOSAL/SOIL SAMPLING,  
PRELIMINARY SITE ASSESSMENT



## BAKERSFIELD FIRE DEPARTMENT

### Prevention Services

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Contractors must have the following information on file in order to obtain a permit: \*

1. Copy of contractor license
2. General liability policy
3. Workman's compensation policy
4. Site safety plan
5. International Code Council pocket licenses

\*Site assessment/sample collection contractor must have a soil sampling and quality control/quality assurance protocol on file.

### GENERAL (REMOVAL)

1. A permit application for an UST abandonment **shall be filed and applicable fees paid 5 working days prior to the commencement of work.** This permit shall remain onsite during the entire removal process.
  - Permit is valid for 90 days
2. **Forty-eight hour advance notice** shall be given to the Bakersfield Fire Department Office of Prevention Services to arrange an inspection appointment.
3. It is the responsibility of the permittee to obtain any permit required by other regulatory agencies (i.e., Building Department and Department of Public Works).
4. Tank Closure activities must follow the Uniform Fire Code and all Federal and Cal-OSHA regulations.
5. It is the Contractors responsibility to know and adhere to all applicable laws and regulations regarding the handling, transportation, or treatment of hazardous materials.
6. If any contractors other than those listed on permit and permit application are to be utilized, prior approval must be granted by the Bakersfield Fire Department Office of Prevention Services. Deviation from the submitted application is not allowed.

### TANK EXCAVATION, REMOVAL, AND DISPOSAL

1. Abandonment of tanks in place will only be allowed if removal would pose undue risk to an existing structure. Proof of risk and a work plan/proposal shall be submitted to the Bakersfield Fire Department Office of Prevention Services for review and approval prior to the commencement of any work activity.
2. Excavation of enough material to expose the top of the tank, removal of contents, high pressure rinsing, and inerting may be done prior to the arrival of the inspector. **Tanks may not be removed without an inspector present.**
3. Job site safety and assuring all Cal-OSHA regulations are followed is the contractor's responsibility.
4. Excavation, holes, pits, trenches, etc. shall be backfilled immediately to a minimum of 90 percent soil compaction or as otherwise specified by the building official under any separate grading requirements. Any excavations not immediately backfilled upon completion of tank removal and soil sampling shall be properly secured (fenced off) to ensure public safety.

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5. Any excavated material from the tank pit, piping runs, etc. not used as approved backfill will be properly disposed of, or if left on location will be either containerized or covered with suitable material to prevent the emission of hazardous, noxious, or unpleasant vapors and/or odors. In addition, the material will be properly secured (fenced off) to ensure public safety.
6. Tanks shall be either decontaminated or transported as hazardous waste.
7. A Hazardous Waste manifest will accompany either the rinseate or the tank and shall be present on site and presented upon request.
8. The interior of tank being transported not as hazardous waste (decontaminated) shall have a lower explosive limit (LEL) of no greater than 5 percent immediately following cleaning and prior to the introduction of carbon dioxide (CO<sup>2</sup>).
  - The contractor shall certify on the inspection form that the cleaning process was properly conducted and the LEL results did not exceed 5 percent.
9. The decontaminated tank shall be inerted with the introduction of CO<sup>2</sup> in the form of dry ice or from canisters.
  - a. A rate of 20 pounds of dry ice to 1,000 gallons of tank capacity, or the corresponding weight of CO<sup>2</sup>.
  - b. If canisters are used, they shall be bonded to the tank.
  - c. A receipt for the CO<sup>2</sup> shall remain on site and presented upon request.
10. Prior to the removal of a decontaminated tank, the LEL level will be no greater than 5 percent and the oxygen level will be no greater than 9 percent.
11. No man-ways may be cut into tanks unless an inspector from Bakersfield Fire Department Office of Prevention Services is present.

### **UNDERGROUND STORAGE TANK ABANDONMENT IN-PLACE**

The following requirements apply to in-place abandonment of underground storage tanks.

1. All conditions noted on the permit are to be strictly followed, including but not limited to:
  - a. Notification of the regulatory agencies involved
  - b. Posting of the permit on the job site in clear view
  - c. Approval from Office of Environmental Services is to be granted for any changes in the original application before beginning any work
2. The preliminary site assessment is to be completed, results submitted to Office of Prevention Services, and approval granted before any of the following required steps are taken.
3. All dispensers and piping, with the exception of the vent line, are to be removed for proper disposal prior to cleaning the tank.
4. The interior of the tank should be water- or steam-rinsed under pressure or the equivalent to remove residual hazardous wastes. Documentation of the rinsing and removal of the rinseate is to be made; all such wastes are considered hazardous wastes unless proven otherwise and shall be transported under manifest. A copy of the manifest, signed by the disposal facility, is to be provided to Office of Prevention Services within 14 days of rinseate removal.
5. The contractor decontaminating the tank is to have a copy of their decontamination procedure on file with Office of Prevention Services.

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6. By use of an explosivity meter that measures LEL, the contractor decontaminating the tank is to document the complete removal of sludge and waste. A maximum 5 percent LEL reading is to be achieved for the tank to be decontaminated and no longer considered a hazardous waste. The contractor should have documentation of training in the use of the explosivity meter on file with Office of Prevention Services and a record of monthly equipment calibration on site.
7. The ends of the tank are to be exposed unless they are under a building.
8. The fill drop tube is to be removed. The vent line should be left attached and open during the entire abandonment process.
9. **The tank should not be filled or punctured until the inspector is present.** Office of Prevention Services requires **2 working days notification**. Only excavation to expose the top of the tank, high pressure rinsing, and removal of flammable/combustible liquids by pumping and inerting as described in #10 below may be done without an inspector present.
10. The tank should be inerted before filling by use of an inert gas, such as CO<sup>2</sup>. The oxygen level will be verified by Office of Prevention Services meter to be below 12 percent.  
**Example:** Use of either CO<sup>2</sup> or dry ice - 2 pounds per 100 gallons of tank capacity of 20 pounds per 1,000 gallons of tank capacity.  
**Note:** Dry ice should be placed in the tank at least 4 hours before Office of Prevention Services inspection.  
**Warning:** If a liquid or gas inerting agent is to be used, the dispensing device shall be electrically grounded to the tank.
11. The tank shall meet the following purging and/or inerting conditions:
  - a. Any remaining liquid shall be pumped from the tank before purging so that less than 8 gallons of liquid remain in the tank.
  - b. The tank shall be purged through a vent pipe that discharges at least 10 feet above ground level.
  - c. No emission shall result in any odors detectable at or beyond the property line.
  - d. No emission shall endanger the health, safety, comfort, or repose of any person.
  - e. The vent lines shall remain attached to the tank until the inspector arrives to authorize the filling.
12. All caps in the top of the tank are to be removed. If the caps at the ends of the tank cannot be removed or do not exist, the tank is to be punctured in a safe manner that reduces deformation. At least 2 holes at opposite ends of the tank are required before the tank filling process can begin.
13. The tank should be filled with a 2-sack concrete mix. Only enough water to allow smooth flow and good compaction should be added to the concrete mix. The filling process is to continue until the material flows from all holes in the top of the tank. Care is to be taken in the filling process to prevent voids from occurring.
14. The vent lines are to be removed and properly disposed of and the tank capped.
15. The backfill over the tank should be compacted to Public Works standards.

### SOIL SAMPLING/PRELIMINARY SITE ASSESSMENT

1. Soil samples shall be obtained under the direction of a professional engineer, geologist, or authorized representative of a State-approved laboratory.
2. Samples shall be collected at a minimum from depths of 2 and 6 feet below the tank bottom, dispensers, and product lines, and from the following locations:
  - a. Tanks less than 1,000 gallons: from the center of the tank
  - b. Tanks 1,000 - 10,000 gallons: one-third of the way in from each end
  - c. Tanks greater than 10,000 gallons: from center and one-fourth of the way in the end of the tank
  - d. Below all dispensers
  - e. Piping: every 20 feet and/or at connections, joints, bends, etc

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3. Any area of obvious contamination of likely areas of contamination may be required to be sampled.
4. All samples shall be analyzed by a State-certified laboratory.
5. Soil samples shall be analyzed for all known and suspected substances to have been stored in the tank. Additionally, methyl tertiary butyl ether (MTBE) shall be analyzed in all soil samples taken from beneath tank systems which contained any motor vehicle fuel.
6. All samples will be accompanied by a chain-of-custody sheet.
7. A soil sample report/preliminary assessment shall be submitted to Office of Prevention Services within 5 days after results have been received and shall contain at a minimum the following information:
  - a. Name and location of where tanks were disposed
  - b. Name and location of where rinseate was disposed
  - c. A signed copy of the Hazardous Waste Manifest
  - d. A tank disposal receipt from the scraping facility
  - e. Copies of all lab data sheets and chain-of-custody documentation
  - f. A plot plan showing the location of buildings, tanks, piping runs, dispensers, and all sample locations with corresponding identification numbers and depths