

Joint Committee on Administrative Rules

ADMINISTRATIVE CODE

**TITLE 41: FIRE PROTECTION
CHAPTER I: OFFICE OF THE STATE FIRE MARSHAL
PART 175 TECHNICAL REQUIREMENTS FOR UNDERGROUND
STORAGE TANKS AND THE STORAGE, TRANSPORTATION, SALE
AND USE OF PETROLEUM AND OTHER REGULATED
SUBSTANCES
SECTION 175.830 REMOVAL OF USTS**

Section 175.830 Removal of USTs

- a) For tank removals, the following requirements and procedures shall be followed:
- 1) Compliance with subsections (a)(2) through (a)(18) is the responsibility of the contractor.
 - 2) Except as otherwise provided in this Section, the procedures of API 1604, incorporated by reference in 41 Ill. Adm. Code 174.210, shall be followed for vapor freeing and inerting procedures.
 - 3) Secure proper permitting and schedule removal date with OSFM. A new permit and fee will be required when there is a failure to meet the Date Certain schedule established under Section 175.320, including not showing for the inspection, not being completely ready for the inspection, allowing the permit to expire before the inspection, or not cancelling the job before 6:00 a.m. the morning of the scheduled activity. (See Section 175.300 for additional permit requirements.)
 - 4) Maintain all combustible gas indicator equipment according to manufacturer's specifications.
 - 5) Establish an exclusion zone within which smoking is prohibited, which shall include all hazardous (classified) locations/areas where work related to removal is being conducted. The use of spark producing/non-explosion

proof equipment is prohibited in the vapor hazard area prior to removal of product and sludges and attaining the lower explosive limit (LEL)/oxygen levels required in subsection (a)(9).

- 6) Excavate to the top of the tank. Drain product from piping into the tank or into approved drums, being careful to avoid any spillage to the excavation area. Safely disconnect product piping from the tank, and remove the piping. Pipe trenches shall remain open for inspection by an OSFM Storage Tank Safety Specialist (STSS). Further excavation below the top of the tank is not allowed until STSS has verified that tank conditions meet the LEL/oxygen criteria of subsection (a)(9).
- 7) Remove all liquids from the tank using explosion-proof pumps or hand pumps. When suctioning product out of tanks, plastic pipes shall not be allowed as a suction tube.
- 8) Regularly monitor the tank atmosphere and the excavation area with a combustible gas indicator for flammable or combustible vapor concentration until the tank is removed from both the excavation and the site. Monitoring the UST shall be done at 3 levels in the tank: top, middle and bottom. A confined space entry permit shall be obtained prior to tank entry and Safety Data Sheets (SDS) must be on site.
- 9) Regularly monitor the tank to insure explosive conditions do not exist. A maximum of 5% of the LEL, or 5% or less oxygen concentration, shall be attained before the tank is considered safe for removal, instead of 10%, as required in the API 1604. Dry ice shall not be allowed as a method of inerting tanks as referred to in API 1604.
- 10) Bond all devices to the tank and ground the tank to a separate ground when vapor freeing the tank with compressed air or using inert gases under pressure. When using inert gases the cylinder shall be equipped with a pressure gauge, so that no more than 5 psi can be discharged into the tank during vapor freeing procedures. To ensure and maintain proper grounding and bonding, the connections shall be tested by the

contractor for continuity. This testing shall be done with equipment designed for continuity testing. When vapor freeing of tanks, plastic pipes shall not be allowed as a vent tube on eductors.

- 11) Plug and cap all accessible tank holes. One plug should have an 1/8 inch vent hole.
- 12) Excavate around the tank to prepare for removal. This shall include excavation along one side and one end, from top to bottom.
- 13) A STSS shall be on site before hot work can proceed.
- 14) With STSS on site, remove tank from the ground. Equipment with sufficient lifting capacity shall be used to lift the tank from the excavation and must be rated as appropriate for the particular site and excavation.
- 15) Protective Equipment and Tank Cleaning Requirements
 - A) Cleaning procedures shall be in accordance with API 2015, incorporated by reference in 41 Ill. Adm. Code 174.210. Personal protection requirements for tank cleaning personnel shall, at a minimum, include the following:
 - i) protective respiratory equipment for tank cleaning personnel shall be the type that provides supplied positive air pressure to a full-face mask throughout the breathing cycle during all cleaning operations, in accordance with API 2015;
 - ii) level B personal protective equipment with body harness and tag line;
 - iii) protective booties;
 - iv) continual monitoring of LEL and oxygen during cleaning; and
 - v) attendant/observer.
 - B) Requirements in subsection (a)(15)(A) shall not

apply in the event that no physical entry is made into the tank.

- 16) Any UST removed from the excavation zone shall be properly cleaned on site the day of the removal and removed from the site within 24 hours.
 - 17) Tanks larger than 2,000 gallons in capacity shall have holes or openings no less than 3 feet x 3 feet, one on each end or side, for cleaning. Tanks less than 2,000 gallons capacity shall have one entire side removed from end to end and shall be no less than 3 feet wide.
 - 18) The use of spark producing/non-explosion proof equipment is prohibited in the vapor hazard area prior to attaining the LEL/oxygen levels required in subsection (a)(9).
 - 19) The tank owner must submit an amended Notification for Underground Storage Tanks on OSFM forms (available at <https://www2.illinois.gov/sites/sfm/About/Divisions/Petroleum-Chemical-Safety/Pages/Applications-and-Forms.aspx>) to OSFM within 30 days after the tank removal.
 - 20) If an STSS has observed evidence of a release, the owner, operator or designated representative of the UST owner/operator must notify the Illinois Emergency Management Agency. This is to be done at the site immediately following the field determination and the incident number shall be given to the STSS prior to his/her leaving the site.
 - 21) All removals require a site assessment pursuant to 41 Ill. Adm. Code 176.330.
 - 22) Any tank being removed without an OSFM permit will be required to be put back in the excavation and vented to 12 feet above grade if it has not been removed from the site and covered with backfill until a permit and licensed contractor can remove it properly.
- b) Bunker Tanks
- 1) A commercial heating oil or emergency power generator

tank situated below grade, in a basement, on a floor, and enclosed in a masonry wall structure, with the tank completely or partially covered by sand, or otherwise not fully accessible to inspection, commonly referred to as a "bunker tank", meets the definition of a UST (see 41 Ill. Adm. Code 174.100). Removal of a bunker tank shall require the owner or operator to hire a licensed decommissioning contractor to secure proper permitting and schedule the removal pursuant to Section 175.320.

- 2) That section of the enclosing masonry partition wall that is not part of the building's basement exterior wall will need to be dismantled, and all sand within the enclosure removed. Both masonry rubble and sand from the enclosure will be hauled off as special waste under manifest by a licensed waste hauler (see 35 Ill. Adm. Code 808 and 809).
- 3) The exposed tank will be emptied as much as possible of any residual liquids, and the area will be monitored for vapors, and ventilation provided as needed to maintain LELs of 5% or less. No further work on the tank removal will be allowed unless the STSS is on site.
- 4) With the STSS on site and LELs at a maximum of 5%, the tank will be accessed for cleaning. Tanks larger than 2,000 gallons in capacity shall have holes or openings no less than 3 feet x 3 feet, one on each end or side, for cleaning. Tanks less than 2,000 gallons capacity shall have one entire side removed from end to end and shall be no less than 3 feet wide.
- 5) Once cleaned, the tank will be cut up on site, the pieces removed from the building, and all parts of the tank scrapped.
- 6) Once the enclosure wall, sand and tank have been properly removed, the area where the bunker tank had been will be evaluated under the direction of the STSS on site.
 - A) For bunker tanks, soil sampling and a site assessment will be required if either of the following conditions are found:
 - i) Evidence indicating product may have

migrated from the bunker tank to the environment beyond the floor or walls of the building it was located within, such as finding free product in a drain; or

ii) Evidence is seen of both leakage of product on the floor or building wall where the bunker tank was located, and the area of floor or wall associated with evidence of leakage of product from the bunker tank is deteriorated or cracked such that there is a possibility of the product having migrated beyond the enclosure confines.

B) In the event that any of the conditions described in subsection (b)(6)(A)(i) or (ii) are found, samples will be obtained from soil borings from beneath the floor or from outside the wall from areas where contamination is most likely to be present, based on the evidence discovered. Samples will be submitted for analysis, and a release shall be reported if indicated.

C) In the event that none of the conditions described in subsection (b)(6)(A)(i) or (ii) are found, no samples from soil borings will be required, and no incident shall be reported.

D) The STSS on site will clearly document his/her observations under "Remarks" on the Log of Removal, noting whether any of the conditions listed in subsections (b)(6)(A)(i) and (ii) were present.

7) In addition to submitting the OSFM Site Assessment Results Report form, the following supplemental documentation shall also be submitted to OSFM to properly close the removal of a bunker tank. The form is available at the website cited in subsection (a)(19).

A) If there is "Contamination" being reported:

i) The report from the lab, including analytical results derived from the soil

samples showing locations of the samples taken, shall be attached to the OSFM Site Assessment Results Report;

- ii) The OSFM form indicating "Contamination" shall be signed by a Professional Engineer or a Professional Geologist;
- iii) The IEMA Incident Number from the release report shall be recorded on the OSFM form; and
- iv) The box indicating "Bunker Tank" shall be marked on the OSFM form.

B) If there is "No Contamination" being reported:

- i) A letter from the contractor shall be submitted, attesting to the proper handling of the debris generated by the removal and a description of the condition of the floor and building walls of the former enclosure (see subsection (b)(6)(A)(ii));
- ii) A copy of the hauler's manifests for the sand and masonry rubble shall be submitted;
- iii) The box indicating "Bunker Tank" shall be marked on the form; and
- iv) The OSFM form indicating "No Contamination" shall be submitted, and may be signed by the property owner.

c) Disposal of Tanks

- 1) If a tank is to be scrapped as junk, it shall be retested for combustible or flammable vapors and, if necessary, rendered gas free.
- 2) If the tank last contained leaded gasoline, an unknown petroleum product or a hazardous substance, it may only be scrapped or junked, recertified, or discarded at a

special waste or hazardous waste landfill as designated by Illinois EPA regulations. If tanks are being re-certified, the contractor must give written notice to OSFM on the removal permit as to the intent to re-certify and re-use the tanks being removed. The re-certified tank must be re-installed within 6 months from removal.

- 3) Removed tanks may not be reused for any purpose other than those allowed by OSFM rules (proper disposal at an approved landfill, scrapped or junked after proper cleaning, or recertified pursuant to OSFM rules).
- 4) Compliance with this subsection (c) is the responsibility of the contractor.

(Source: Amended at 42 Ill. Reg. 10476, effective October 13, 2018)