

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL**

Pollution Control

Part 561 Compliance Requirements

Chapter 7 Underground Storage Tanks

561 FW 7

7.1 What is the purpose of this chapter? This chapter provides guidance for the proper management of Underground Storage Tanks (USTs) on Fish and Wildlife Service facilities.

7.2 Who is responsible for administering the program?

A. The Chief, Division of Engineering is responsible for providing technical guidance and assistance to the Region in meeting the requirements of UST laws and regulations.

B. Regional Directors have overall responsibility for ensuring that all facilities in their respective Regions are in compliance with applicable UST regulations.

C. Regional Engineers/Compliance Coordinators are responsible for providing technical assistance to field stations to ensure that UST compliance goals are met. They will coordinate and assist in budgeting, design, and construction contracting for remediation of USTs, as required.

D. Project Leaders/Facility Managers are responsible for complying with all UST regulations, meeting all reporting and recordkeeping requirements, and notifying Regional Compliance Coordinators and Regional Spill Coordinators of noncompliance situations.

E. Regional Spill Coordinators are responsible for responding to release situations that require their coordination efforts.

7.3 What are the authorities for this chapter?

A. Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6991-6991i).

B. 40 CFR 280, Environmental Protection Agency Technical Standards and Corrective Action Requirements for Owners and Operators of USTs.

7.4 What are the definitions of terms used in this chapter?

A. Aboveground Release. Any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of a UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from a UST system.

B. Belowground Release. Any release to the subsurface of the land and to groundwater. This includes, but is not limited to, releases from the belowground portion of a UST system and belowground releases associated with overfills

and transfer operations as the regulated substance moves to or from a UST.

C. Cathodic Protection. A technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

D. Free Product. A regulated substance that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water).

E. Implementing Agency. Environmental Protection Agency (EPA), or, in the case of a State with a program approved under Section 9004 (or pursuant to a memorandum of agreement with EPA), the designated State or local agency responsible for carrying out an approved UST program.

F. Petroleum UST System. A UST system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

G. Release Detection. Determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

H. Underground Storage Tank. Any one or a combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any of the following:

(1) A farm or residential tank of 1100 gal [4163.95 L] or less capacity used for storing motorfuel for noncommercial purposes.

(2) A tank used for storing heating oil for consumptive use on the premises where stored.

(3) Septic tanks.

(4) A pipeline facility (including gathering lines) that is regulated by other Acts.

(5) A surface impoundment, pit, pond, or lagoon.

(6) A stormwater or wastewater collection system.

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL**

Pollution Control

Part 561 Compliance Requirements

Chapter 7 Underground Storage Tanks

561 FW 7

- (7) A flowthrough process tank.
- (8) A liquid trap or associated gathering lines directly related to oil or gas production and gathering operation.
- (9) A storage tank situated in an underground area if the storage tank is situated upon or above the surface of the floor, such as basements or tunnels.
- (10) Tanks holding 110 gal [416.40 L] or less.
- (11) Any pipes connected to any tank which is described in (1) through (10) above.

I. UST System. A UST, connected underground piping, underground ancillary equipment, and containment system, if any.

7.5 What are the program requirements?

A. New Petroleum UST Systems are those that are installed after December 22, 1988. New systems must meet the following requirements:

- (1) The new tank and piping must be installed according to standard industry codes and the installation must be certified. Installation includes excavating, tank system siting, burial depth, tank system assembly, backfilling of the tank system, and surface grading.
- (2) USTs must be equipped with devices that prevent spills and overfills. There are three methods of preventing spills and overfills:
 - (a) The volume available in the tank should be greater than the volume of the product that is being transferred and this should be verified **before** the transfer is made.
 - (b) The transfer operation should be monitored constantly.
 - (c) Both spill prevention and overfill devices must be installed with new UST systems. The only exception to this requirement is if the UST system is filled only by separate transfers of no more than 25 gallons.
- (3) The UST and piping must be protected from corrosion by one of the following methods:
 - (a) Steel tanks and piping can be coated with a corrosion-resistant coating and "cathodically" protected. Cathodic protection uses either sacrificial anodes or impressed current.
 - (b) Tanks and piping can be made totally of a noncorrodible material, such as fiber glass-reinforced plastic. Metal piping connected to noncorrodible tanks still requires corrosion protection.

(c) Steel tanks (but not piping) can be protected using a method in which a thick layer of noncorrodible material is bonded to the tank.

(d) Tanks and piping can be protected by other methods approved by the regulatory authority.

(4) Both the tank and the piping must be equipped with release detection. Release or leak detection equipment must meet the following basic requirements:

(a) Should be able to detect a leak from any portion of the tank or its piping.

(b) Release detection equipment must be installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions.

(c) Leak detection equipment for tanks and piping must meet the performance requirements described in paragraph 7.5B.

B. Leak Detection.

(1) **Tanks.** Leak detection for tanks consists of one or a combination of the following methods as described in 40 CFR 280.43:

(a) Automatic tank gauging.

(b) Vapor monitoring.

(c) Groundwater monitoring.

(d) Interstitial monitoring.

(e) Other methods that have met regulatory approval as described in 40 CFR 280.43(h).

(f) **Tank Tightness Testing Combined with Inventory Control.** This method combines manual inventory control information (measured daily and compiled monthly) with tank tightness testing every year unless the tank is upgraded. Tank tightness testing requires taking the UST out of service while changes in level or volume over time are measured. This method can be used only by new or upgraded USTs during their first 10 years of operation. After that, one of the monthly monitoring methods described in (1)(a)-(e) above, must be used.

(g) **Manual Tank Gauging.** This method can be used as the sole method of leak detection only for small tanks up to 1000 gallons. It involves keeping the tank undisturbed for at least 36 hours, during which the tank's contents are measured twice at the beginning and twice at the end of the test period. Tanks between 1,000 and 2,000 gallons can

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL**

Pollution Control

Part 561 Compliance Requirements

Chapter 7 Underground Storage Tanks

561 FW 7

use this method only in combination with tank tightness testing.

(2) Pipes. Depending upon the type of piping system used, the following methods are available for leak detection as described in 40 CFR 280.44:

(a) Pressurized Piping. An automatic line leak detector must be installed and either an annual line tightness test must be conducted or monthly leak detection monitoring must be performed using any one of the methods described in 7.5B(1)(a)-(e).

(b) Suction Piping. The following methods are available for leak detection:

(i) Either a line tightness test must be conducted every 3 years or monthly leak detection monitoring must be performed using any one of the methods described in paragraph 7.5B(1)(a)-(e).

(ii) No leak detection for suction piping is required if below-grade piping is sloped so that the piping's contents will drain back into the storage tank if the suction is released and if only one check valve is included in each suction line and is located directly below the suction pump.

C. Chemical UST systems. UST regulations apply to the hazardous chemicals identified by Section (14) of the Comprehensive Environmental Response, Compensation, and Liability Act or Superfund except for those listed as hazardous wastes. Hazardous wastes are regulated under Subtitle C of RCRA and are not covered by the UST regulations.

D. Releases. Warnings may emanate from leak detection equipment, unusual operating conditions, suspected environmental damage, or from detection monitoring. If any of the above occur:

(1) A tightness testing of the entire UST system is done within seven days of a suspected release to determine whether a leak is in the tank or the delivery piping.

(2) The UST site is investigated for additional information on the extent and nature of the environmental damage.

(3) Response to confirmed leaks and spills (including overfills):

(a) The implementing agency (see definition) and the Regional Spill Coordinator should be notified within 24 hours of a confirmed leak or spill. However, petroleum spills and overfills of less than 25 gallons do not have to be reported if they are immediately contained and the releases are cleaned up.

(b) Any explosive vapors and fire hazards are removed from the leak or spill so that it does not pose any hazard to human health and safety. The local fire department should be able to help to carry out this task.

(c) As much of the substance as is necessary to prevent further release is removed from the UST system.

(d) Visual inspection of aboveground releases or exposed belowground releases is done and further migration of the released substance into surrounding soils and groundwater is prevented.

(e) Hazards from contaminated soils that are excavated or exposed are remedied.

(f) A progress report is submitted, within 20 days, to the implementing agency summarizing initial abatement measures and site checks and any information and data collected.

(g) Within 45 days of a confirmed release, information assembled about the site and nature of the release according to 40 CFR 280.64 (a), should be submitted to the implementing agency in a manner that demonstrates the applicability and technical adequacy.

(h) Facilities with a confirmed release from petroleum or hazardous substance USTs where site investigations have indicated free product, must remove the free product as required by the implementing agency.

(i) Within 45 days after confirming a release, a free product removal report is submitted to the implementing agency according to the format provided by 40 CFR 280.64(d).

(j) Based on information provided, the implementing agency may require a corrective action plan that provides for adequate protection of human health and the environment as determined by the implementing agency. For each confirmed release that requires a corrective action plan, the implementing agency must provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. Public participation is conducted according to 40 CFR 280.67.

E. Repair of Leaks.

(1) A leaking tank can be repaired if standard industry codes that establish the correct way to conduct repairs are followed and if State and local regulations permit repair. Within 30 days of the repair, the tank should be inspected or tightness tested following standard industry codes or monitored using one of the monthly leak detection monitoring methods according to paragraph 7.5B(1)(a)-(e).

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL**

Pollution Control

Part 561 Compliance Requirements

Chapter 7 Underground Storage Tanks

561 FW 7

Within 6 months of repair, USTs with cathodic protection must be tested to show that the cathodic protection is working properly. Records must be kept of repairs as long as the repaired UST is in service.

(2) Damaged metal piping cannot be repaired and must be replaced. Piping made of fiberglass-reinforced plastic, however, can be repaired but only in accordance with the manufacturer's instructions or national code of practice. Within 30 days of the repair, piping must be tested using the same methods used for testing tank repairs.

F. Closing USTs. Federal regulations allow USTs to be closed permanently or temporarily. However, State and local regulations vary widely and, in some instances, require the removal of USTs that are scheduled to be closed. The following information pertains only to States that allow UST closure:

(1) Permanent Closure. If the UST is not protected from corrosion and remains closed for more than 12 months or a decision is made to close the UST permanently, the following requirements must be followed:

(a) The implementing agency must be notified 30 days before the UST is closed.

(b) If leaks from the UST have damaged the surrounding environment, corrective actions must be taken according to 7.5D(3).

(c) The tank must be emptied and cleaned by removing all liquids, dangerous vapor levels, and accumulated sludge. These potentially very hazardous actions need to be carried out carefully by following standard safety practices. Tank closure will be accomplished in strict compliance with State and local regulations. If the UST is allowed to be left in the ground, it must be filled with a harmless, chemically inactive solid, like sand.

(2) Temporary Closure. Tanks not used from 3 to 12 months must follow requirements for temporary closure:

(A) If the UST has corrosion protection and leak detection, these protective systems must be active and if a leak is found, response would be as if it were from an active UST. If the UST is empty, the leak detection system need not be maintained.

(b) All lines, except the vent line, attached to the UST must be capped.

G. Reporting. In general, the implementing agency needs to be notified only at the beginning and the end of the UST system's operating life. When a UST is installed, a notification form available from the State is to be completed and sent to the implementing agency along with a certificate of installation for new UST. Reports of all

releases including suspected releases, spills, overfills and confirmed releases are also to be submitted. Other reports include planned or completed corrective actions. The implementing agency is to be notified 30 days before permanent closure/removal of a UST or a change-in-service.

H. Recordkeeping. A facility must maintain the following information:

(1) Documentation of operation of corrosion protection equipment; if protection is not used, a corrosion expert's analysis of site corrosion potential.

(2) Documentation of UST system repairs, if any.

(3) Documentation of leak detection performance and maintenance.

(4) Results of the site investigation conducted at permanent closure/removal are to be kept for at least 3 years after closing a UST.