

**FISH AND WILDLIFE SERVICE
POLLUTION CONTROL AND ENVIRONMENTAL COMPLIANCE**

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OVERVIEW

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

7.2 What is the Service policy on USTs? It is our policy to:

- A. Follow Federal, State, and local requirements;
- B. Manage existing USTs to prevent leaks, detect potential leaks before they happen, and clean up leaks as efficiently as possible; and
- C. Not install any new USTs unless an exception is approved by the Regional Director (see section 7.6).

7.3 What are the authorities for this chapter?

- A. The Resource Conservation and Recovery Act (RCRA), as amended ([42 U.S.C. 6991-6991i](#)).
- B. Technical Standards and Corrective Action Requirements for Owners and Operators of USTs, U.S. Environmental Protection Agency (EPA) ([40 CFR 280](#)).
- C. The Energy Policy Act (EPACT) of 2005 ([Public Law 109-58](#)).

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7.4 What terms do you need to know to understand 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 an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

B. Belowground Release. Any release to the subsurface of the land or to groundwater. This includes, but is not limited to, releases from the belowground portion of an UST system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an 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 (i.e., liquid not dissolved in water).

E. Implementing Agency. The “implementing agency” is either the EPA, or the State or local agency. EPA has designated certain States and local agencies with a program approved under Section 9004 (or through a memorandum of agreement with EPA), as responsible for carrying out approved UST programs.

(1) If the State or local agency has an EPA-approved UST program, then that agency is the implementing agency. To determine your State's/local agency's UST program status, visit [EPA's Web site](#).

(2) If the State/local agency does not have an EPA-approved UST program, then the EPA is the implementing agency.

(3) Please note that State and local requirements that are more stringent are applicable, regardless of the implementing agency.

F. Operator. Any person in control of, or having responsibility for, the daily operation of an UST system.

G. Petroleum UST System. An UST system that contains petroleum or a mixture of petroleum with small 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.

H. Release Detection. Determining whether a release of a regulated substance has occurred from the UST system into the environment or into the gap between the UST system and its secondary barrier or secondary containment.

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

(1) Field-constructed tanks. Generally these tanks are made of concrete or are constructed at the site (e.g., concrete poured into forms or otherwise fabricated in the field);

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

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(3) Septic tanks;

(4) A pipeline facility (including gathering lines) that is regulated by other sections of the United States Code (U.S.C.);

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

(6) A stormwater or wastewater collection system;

(7) A flowthrough process tank;

(8) A liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;

(9) A storage tank situated in an underground area if the storage tank is situated on or above the surface of the floor, such as in basements or tunnels;

(10) Tanks holding 110 gallons (416.40 L) or less; or

(11) Any pipes connected to tanks described in (1) through (10) above.

J. UST System. An UST, connected underground piping, underground ancillary equipment, and containment system, if any.

7.5 Who is responsible for administering the program?

Table 7 1: Responsibilities for administering the UST program	
This official...	Is responsible for...
A. The Director	Approving policy for the UST program.
B. The Assistant Director - Business Management and Operations	Ensuring that the Service maintains an appropriate and effective UST program.
C. Regional Directors	(1) Ensuring that the facilities in their respective Regions are in compliance with applicable UST regulations, and (2) Approving exceptions for new USTs.
D. The Chief, Division of Engineering	(1) Keeping this policy up-to-date, and (2) Providing technical guidance and assistance to the Regions to ensure compliance with applicable UST regulations.
E. Regional Engineers and Regional Environmental Compliance Coordinators (RENs/RECCs)	(1) Providing technical assistance to field stations to ensure that UST compliance goals are met; (2) Coordinating and assisting in budgeting, design, and construction contracting for remediation of USTs, as required; and (3) Reviewing and coordinating requests from Project Leaders/Facility Managers for exceptions to install a new UST(s) at their facility and advising the Regional Director on whether the request satisfies the requirements in

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Table 7 1: Responsibilities for administering the UST program	
This official...	Is responsible for...
	sections 7.6 and 7.7.
F. Project Leaders/Facility Managers	<ul style="list-style-type: none"> (1) Complying with UST regulations and this policy, (2) Meeting reporting and recordkeeping requirements, (3) Notifying RECCs of any USTs that are out of compliance, (4) Notifying RECCs of any new USTs discovered at their facility, (5) Notifying RECCs of any UST closures, (6) Submitting requests to the RENs/RECCs if they want an exception to install a new UST(s) at their facility, and (7) Ensuring that UST operator training is provided to tank operators.
G. Regional Spill Coordinators	Responding to releases that require their coordination efforts.

INSTALLING AND UPGRADING USTs

7.6 When may a Project Leader/Facility Manager ask for an exception to install an UST, and how would they request one?

A. The Regional Director may choose to grant an exception if the UST is mission critical and one of the following conditions is met:

- (1) It is not technically feasible to install an Aboveground Storage Tank (AST), or
- (2) Regulatory requirements prohibit the installation of ASTs due to distance, compatibility, and volume constraints.

B. The Project Leader/Facility Manager must send the request to the RECC, who will review and advise the Regional Director on whether the request is acceptable.

7.7 What are the requirements for new UST systems (those installed after December 22, 1998)?

A. Installation: All UST system work must be performed by competent personnel (i.e., those with appropriate credentials, such as State licenses or certifications) and in accordance with the implementing agency's requirements.

- (1) The piping must be installed according to standard industry codes, and
- (2) The implementing agency must certify the installation. Installation includes excavating, tank system siting, burial depth, tank system assembly, backfilling the tank system, and surface grading.

B. Spill and Overfill Prevention: The UST system must be equipped with devices that prevent spills and overfills.

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(1) To prevent spilling and overfilling associated with product transfer, UST systems must have a spill catchment basin or similar technology.

(2) To prevent overfilling, the systems must have at least one of the following:

(a) An automatic shut-off that restricts flow into the tank when the tank is no more than 95% full;

(b) A high level alarm alerting the transfer operator when the tank is no more than 90% full; or

(c) A device that restricts flow 30 minutes prior to overfilling, alerts the operator with a high level alarm 1 minute before overfilling, and automatically shuts off the flow into the tank so that none of the fittings on top of the tank are exposed to product due to overfilling.

(3) The only exception to having the prevention equipment described in sections [7.7B\(1\) and \(2\)](#), is if the UST system is filled by separate transfers of no more than 25 gallons, or the RECC determines that alternate spill and overflow prevention equipment is equivalent to the prevention equipment requirements.

C. Corrosion Protection: The UST and piping must be protected from corrosion by one of the following methods:

(1) Steel tanks and piping coated with a corrosion-resistant coating and cathodically protected (see [section 7.4C](#)). Cathodic protection uses either sacrificial anodes or impressed current;

(2) Tanks and piping made totally of a noncorrodible material, such as fiberglass-reinforced plastic. Metal piping connected to noncorrodible tanks still requires corrosion protection;

(3) Steel tanks (but not piping) using a thick layer of noncorrodible material bonded to the tank; or

(4) Other protection methods approved by the implementing agency.

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

(1) Can detect a leak from any portion of the tank or its piping;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions; and

(3) Meets the performance requirements described in [sections 7.9A and B](#).

E. Inspections: At least once every 3 years, the implementing agency will certify, test, or inspect Service UST systems to demonstrate compliance with a nationally recognized association (e.g., Steel Tank Institute) or an independent testing laboratory and in accordance with the manufacturer's instructions.

7.8 What are the requirements for UST systems installed before December 22, 1998?

A. Upgrade or Close: These UST systems must be upgraded by competent personnel to meet all the requirements in [section 7.7](#) or be closed. See [section 7.11](#) for the closure requirements.

B. Tank Upgrading Requirements: Steel tanks must be upgraded in one of the following ways in accordance with a code of practice developed by a nationally recognized association (e.g., Steel Tank Institute) or an independent testing laboratory:

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(1) *With an interior lining.* A tank with an interior lining may be upgraded if:

(a) The lining is installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory (e.g., American Petroleum Institute Publication 1631, “Recommended Practice for the Interior Lining of Existing Steel USTs”), and

(b) Within 10 years after installing the lining, and every 5 years thereafter, we inspect the interior lining and find it structurally sound and still performing in accordance with original design specifications.

(2) *With cathodic protection.* We can upgrade a tank with cathodic protection if the cathodic protection system meets the requirements in [section 7.7C\(1\)](#) and we can ensure the integrity of the tank using one of the following methods:

(a) The tank is internally inspected and assessed to ensure that it is structurally sound and free of corrosion holes prior to installing the cathodic protection system;

(b) The tank has been installed for less than 10 years and is monitored monthly for releases as described in [section 7.9A\(1\)](#);

(c) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two tightness tests as described in [section 7.9A\(2\)](#). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between 3 and 6 months following the first operation of the cathodic protection system; or

(d) The tank is assessed for corrosion holes by another method that the Service determines is equivalent to the methods above.

(3) *With interior lining and cathodic protection.* We can upgrade a tank using interior lining and cathodic protection if both methods meet the requirements in [sections 7.8B\(1\) and \(2\)](#).

DETECTING AND DEALING WITH LEAKS

7.9 What are the requirements for detecting leaks in UST systems? UST systems must be equipped with a method or combination of methods for leak detection.

A. Tanks: Tanks must be equipped with one or more leak detection methods (see [40 CFR 280.43](#)).

(1) *Leak detection methods* include:

(a) Automatic tank gauging,

(b) Vapor monitoring,

(c) Groundwater monitoring,

(d) Interstitial monitoring, and

(e) Other methods that meet regulatory approval as described in [40 CFR 280.43\(h\)](#).

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(2) 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 until the tank is upgraded. Tank tightness testing requires taking the UST out of service while measuring the changes in level or volume over time. This method may only be used on new or upgraded USTs during their first 10 years of operation. After that, we must use one of the monthly monitoring methods described in [section 7.9A\(1\) above](#).

(3) Manual tank gauging: This method may only be used for small tanks up to 550 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.

(4) Inventory control: Tanks between 551 and 2,000 gallons may use the method for manual inventory control. It involves monitoring product inventory to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis, as described in 40 CFR 280.43(a) and (b) .

B. Piping: Different methods for leak detection on pipes may be used, depending on the type of piping system (see [40 CFR 280.44](#)):

(1) Pressurized piping: For this type of pipe, install an automatic line leak detector and conduct either an annual line tightness test, or monitor it monthly using any one of the methods in [section 7.9A\(1\)](#).

(2) Suction piping:

(a) Either conduct a line tightness test every 3 years or monitor it monthly using one of the methods in [section 7.9A\(1\)](#).

(b) No leak detection for suction piping is required if:

(i) Below-grade piping is sloped so that the piping's contents will drain back into the storage tank if the suction is released,

(ii) Only one check valve is included in each suction line, and

(iii) The check valve is located directly below the suction pump.

C. Hazardous substance UST systems: UST regulations apply to the hazardous chemicals identified in Section 14 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) (see [40 CFR 302.4](#) for a list), except for those listed as hazardous wastes. UST systems with CERCLA chemicals must have additional leak detection for secondary containment, double-walled tanks, external liners, and underground piping (see more detailed requirements in [40 CFR 280.42](#)). Hazardous wastes are regulated under Subtitle C of RCRA and are not covered by the UST regulations.

D. Petroleum UST systems: Owners and operators of petroleum UST systems must provide release detection as follows:

(1) Tanks must be monitored at least every 30 days for releases using one of the methods in [section 7.9A\(1\)](#) (except as described in [40 CFR 280.41\(a\)](#)), and

(2) The underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets the requirements [in sections 7.9B\(1\) and \(2\)](#).

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7.10 What are the requirements related to releases? Warnings may emanate from leak detection equipment, unusual operating conditions, suspected environmental damage, or from detection monitoring.

A. If a leak is suspected, then we must investigate the UST site within 7 days to confirm the leak and determine the extent and nature of the environmental damage. To confirm a suspected leak, we may perform a tightness test of the entire UST system.

B. When a leak, spill, or overfill is confirmed (except for spills and overfills of petroleum that are less than 25 gallons), we must:

(1) Notify the RECC, implementing agency, and the Regional Spill Coordinator within 24 hours. Petroleum spills and overfills of less than 25 gallons, or another reasonable amount that the implementing agency specifies, do not have to be reported if they are immediately contained and the releases are cleaned up (see [560 FW 3](#), Reporting Releases of Hazardous Substances, Oil Discharges, and Contaminated Sites);

(2) Remove any explosives and flammable materials from the area near the leak or spill so that it does not pose an additional hazard to human health and safety. Store explosives in accordance with [244 FW 1](#) and flammable liquids in accordance with [29 CFR 1910.106](#). Contact the fire department in situations where leaked materials have mixed with flammable materials or explosives—they should be able to carry out this task;

(3) Remove as much of the leaking material as necessary from the system to prevent further release;

(4) Visually inspect aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soil and groundwater;

(5) Properly store, manage, and dispose of contaminated soil that is excavated or exposed in accordance with State and Federal requirements;

(6) Send a progress report within 20 days to the implementing agency summarizing initial abatement measures and site checks and any information and data collected;

(7) Within 45 days of a confirmed release, assemble information about the site and nature of the release according to [40 CFR 280.64\(a\)](#), and send it to the implementing agency in a manner that demonstrates the technical adequacy of the remediation efforts; and

(8) For facilities with a confirmed release from petroleum or hazardous substance USTs where site investigations have indicated free product, remove the free product as required by the implementing agency. Within 45 days after confirming a release, send a free product removal report to the implementing agency using the format provided in [40 CFR 280.64\(d\)](#).

C. Based on information provided, the implementing agency may require that we develop a corrective action plan that provides for adequate protection of human health and the environment. For each confirmed release that requires a corrective action plan, the implementing agency will notify the public about the planned corrective actions.

D. The implementing agency conducts public participation according to [40 CFR 280.67](#).

E. Repairing leaks:

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(1) We can repair a leaking tank if we follow standard industry codes that establish the correct way to conduct repairs and if State and local regulations allow it. 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 in [section 7.9A\(1\)](#). Within 6 months of repair, USTs with cathodic protection must be tested to show that the cathodic protection is working properly. We must keep records of repairs as long as the repaired UST is in service.

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

CLOSING USTs

7.11 What are the requirements for closing USTs? Federal regulations allow USTs to be closed permanently or temporarily. State and local regulations vary widely and, in some instances, require the removal of USTs when they are closed. The following information pertains only to States that allow UST closure without removal:

A. Permanent Closure: If the UST is not protected from corrosion and isn't used for more than 12 months, or we decide to close the UST permanently, we must follow these requirements:

(1) Notify the implementing agency 30 days before closing the UST;

(2) Empty and clean the tank by removing all liquids, dangerous vapor levels, and accumulated sludge, and carefully follow standard safety practices. The tank closure must be accomplished in strict compliance with State and local regulations. If the UST is left in the ground, it must be filled with a harmless, chemically inactive solid, like sand; and

(3) If leaks from the UST have damaged the surrounding environment, we must take corrective actions as described in [section 7.10B](#).

B. Temporary Closure: We must prepare tanks not used for between 3 and 12 months as follows:

(1) If the UST has corrosion protection and leak detection, these protective systems must be active. If a leak is found, we must respond just as we would for an active UST. If the UST is empty, there is no need to maintain a leak detection system; and

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

OTHER REQUIREMENTS

7.12 What are the reporting requirements associated with USTs? We need to notify the implementing agency:

A. In general, only at the beginning and the end of the UST system's operating life. When an UST is installed, we need to complete a notification form that is available from the State and send it to the implementing agency with a certificate of installation for a new UST;

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B. About all releases, including suspected and confirmed releases, spills, and overfills;

C. About any planned or completed corrective actions; and

D. Within 30 days before permanent closure/removal of an UST or a change-in-service.

7.13 What are the recordkeeping requirements related to USTs? A facility must maintain documentation in accordance with the following requirements, or as recommended by the implementing agency.

A. Keep documentation related to release detection for the following time periods:

(1) Sampling, testing, and monitoring documentation for 1 year;

(2) Documentation on calibration, maintenance, and repair of release detection equipment for 1 year after the service is completed; and

(3) Schedules of required calibration and maintenance and any claims provided by the manufacturer for 5 years.

B. Keep evidence of financial assurance and responsibility until the tank has been properly closed.

C. Documentation on operation of corrosion protection equipment is required. If corrosion protection is not used, a corrosion expert's analysis of site corrosion potential is required.

D. A facility must keep the results of site investigations conducted at permanent closure/removal for at least 3 years after closing an UST.

7.14 What training may be required if a facility has an operating UST? Service facilities must comply with all UST operator training requirements.

A. Click here to check the status of your [State's requirements](#).

B. For information on specific State UST operator training requirements, contact your State's environmental agency. Click here for a list of [State contacts](#).

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DEPUTY DIRECTOR

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