

SCOPE & DEFINITIONS

This Chapter contains criteria to control and abate pollution resulting from POL products and hazardous materials stored in underground storage tanks (USTs). Standards for USTs containing dangerous wastes are covered in Chapter 6.

Azienda Regionale Protezione Ambiente (ARPA) – The Italian Regional Agency for Environmental Protection. These are the Regional offices of the National Agency for Environmental Protection (ANPA), which is the technical department of the Italian Environmental Ministry.

Hazardous Material – Any material defined as a hazardous material in Chapter 5. The term does not include:

- Petroleum, including crude POL or any fraction thereof, that is not otherwise specifically listed or designated as a hazardous material above
- Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)

POL – Refined petroleum, oils, and lubricants.

Tank Tightness Testing – A test which must be capable of detecting a 0.38 liter (0.1 gallon) per hour leak from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

Underground Storage Tank (UST) – Any tank including underground piping connected thereto, larger than 416 liters (110 gallons), that is used to contain POL products or hazardous material and the volume of which, including the volume of connected pipes, is 10% or more beneath the surface of the ground, but does not include:

- Tanks with a capacity of less than 15,000 liters (3,963 gallons) containing heating oil used for consumption on the premises where it is stored
- Septic tanks
- Stormwater or wastewater collection systems
- Flow through process tanks
- Surface impoundments, pits, ponds, or lagoons
- Field constructed tanks
- Hydrant fueling systems

- Storage tanks located in an accessible underground area (such as a basement or accessible vault) if the storage tank is situated upon or above the surface of the floor
- USTs containing de minimus concentrations of regulated substances, except where C19.3.3 is applicable
- Emergency spill or overflow containment UST systems that are expeditiously emptied after use

New UST – Any UST installed on or after 1 October 1994.

Hazardous Material UST – An UST that contains a hazardous material (but not including dangerous waste as defined in Chapter 6) or any mixture of such hazardous materials, and petroleum, and which is not a petroleum UST.

CRITERIA

C19.1 RECORD-KEEPING

All installations will maintain an UST inventory.

All installations must maintain an UST log book whose entries must include the following information for each UST:

- Year of installation of the UST
- Date of each periodic function/control test
- Date of each tightness test
- Any modification to the UST
- Any anomaly or accident involving the UST

All USTs (excluding aircraft fuel USTs on military airfields) must be reported to the Italian Base Commander (who may transmit the information to the ARPA; see Chapter 1 for the process). Changes in the UST status must also be reported to the Italian Base Commander.

C19.2 NEW POL USTS

All new petroleum UST systems will be properly installed, protected from corrosion, provided with spill/overflow prevention, and will incorporate leak detection as described below. New USTs will either be double-walled or have a secondary containment vault. The UST and the associated equipment must be checked and certified as operational by the company installing the system.

C19.2.1. Corrosion Protection. New tanks and piping must be provided with corrosion protection unless constructed of fiberglass or other non-corrodible materials.

New double-walled USTs (excluding aircraft fuel USTs on military airfields) must have UST walls constructed of one of the following:

- Both metallic, with the external surface coated with an anti-corrosion layer
- Metallic internal surface and non-metallic external surface
- Both non-metallic, if the wall material is both resistant to corrosion and to mechanical stress
- Non-metallic internal surface and anti-corrosion-coated metallic external surface

Single-walled USTs are permitted if placed in a containment vault that has been coated with an impermeable material and equipped with continuous leak monitoring. The same vault may hold more than one UST without partitioning.

C19.2.2 Spill/Overflow Protection. New USTs will be provided with spill and overflow prevention equipment, except where transfers are made in the amounts of 95 liters (25 gallons) or less. Where spill and over-fill protection are required, a spill containment box must be installed around the fill pipe. Overfill prevention will be provided by one of the following methods:

- Automatic shut-off device (set at 95% of tank capacity)
- High level alarm (set at 90% of tank capacity)

C19.2.3 Leak Detection. Leak detection systems must be capable of detecting a 0.38 liter/hour (0.1 gallon/hour) leak rate or a release of 568 liters (150 gallons) (or 1% of the tank volume, whichever is greater) within 30 days with a probability of detection of 0.95 and a probability of false alarm of not more than 0.05.

- New USTs must be equipped with interstitial monitoring for leak detection.
- All new pressurized UST piping must be equipped with automatic line leak detectors and utilize either an annual tightness test or monthly monitoring. In addition, all pressurized piping (excluding aircraft fuel USTs at military airfields) must be installed with a “sleeve” or equivalent system to collect leaks/spills.
- Suction piping will either have a line tightness test conducted every 3 years or use monthly monitoring.

C19.3 EXISTING POL USTs

Existing USTs and piping will be properly closed if not needed or will be upgraded or replaced to meet the new UST system requirements in C19.2 by 13 August 2004.

- C19.3.1 Existing USTs and piping not incorporating leak detection will be tightness tested annually (in accordance with recognized U.S. or comparable Italian industry standards) and inventoried monthly to determine system tightness, until the date of the required UST replacement/upgrade (above). Tightness testing must be conducted by qualified personnel (i.e., personnel who can demonstrate that they possess appropriate expertise in that field). The test results must be logged into the UST log book.
- C19.3.2 All existing leaking USTs will be immediately removed from service. If the UST is still required, it will be repaired or replaced. If the UST is no longer required it will be removed from the ground. When a leaking UST is removed, exposed free product and/or obviously contaminated soil in the immediate vicinity of the tank will be appropriately removed and managed. Installations will make any required notifications in accordance with C18.2.3. Additional action will be governed by DoDI 4715.8 (Environmental Remediation for DOD Activities Overseas) and EUCOM 80-2 (Environmental Executive Agent Remediation Policy). Under extenuating circumstances (e.g., where the UST is located under a building), the UST will be cleaned and filled with an inert substance, and left in place.
- C19.3.3 When a UST has not been used for 1 year, all of the product and sludges must be removed. Subsequently, the tank must be either cleaned and filled with an inert substance, or removed. Tank wastes must be tested in accordance with C9.3.

C19.4 NEW HAZARDOUS MATERIAL USTs

- C19.4.1 All new hazardous material USTs and piping must meet the same design and construction standards as required for new petroleum USTs and piping, and in addition must be provided with secondary containment for both tank and piping. Secondary containment can be met by using double-walled tanks and piping, liners, or vaults.
- C19.4.2 Leak Detection. The interstitial space (space between the primary and secondary containment) for tanks and piping must be monitored monthly for liquids or vapors following the requirements of C19.2.3.

C19.5 EXISTING HAZARDOUS MATERIAL USTs

- C19.5.1 Existing hazardous material tanks and piping will be upgraded or replaced to meet the new hazardous material tanks and piping requirements indicated in C19.4.
- C19.5.2 Existing tanks and piping not incorporating leak detection will be tightness tested annually and inventoried monthly.

C19.6 MAXIMUM STORAGE VOLUME OF NEW USTS

The maximum storage capacity of new USTs (excluding aircraft fuel USTs at military airfields) is limited to:

- 50,000 liters (13,227 gallons) for USTs containing any flammable substances at any gas stations
- 100,000 liters (26,455 gallons) for USTs containing liquid hazardous materials classified as very toxic or toxic (defined in Chapter 5), but not flammable

C19.7 IDENTIFICATION TAGS FOR NEW USTS

New USTs (excluding aircraft fuel USTs at military airfields) must have an identification tag with the following information:

- Name and address of the UST manufacturer
- Year of construction
- Storage capacity, wall thickness, and construction material(s)
- UST operating pressure and operating pressure of the interstitial space

C19.8 MINIMUM DISTANCE FOR USTS FROM DRINKING WATER SUPPLY WELLS

USTs for POL and/or hazardous materials must be at least 200 meters from any drinking water supply well.

ADMINISTRATIVE ITEMS

1. All USTs (excluding aircraft fuel USTs on military airfields) must be reported to the Italian Base Commander, who may transmit the information to the ARPA.
2. Changes in UST status must also be reported to the Italian Base Commander, who may transmit the information to the ARPA.