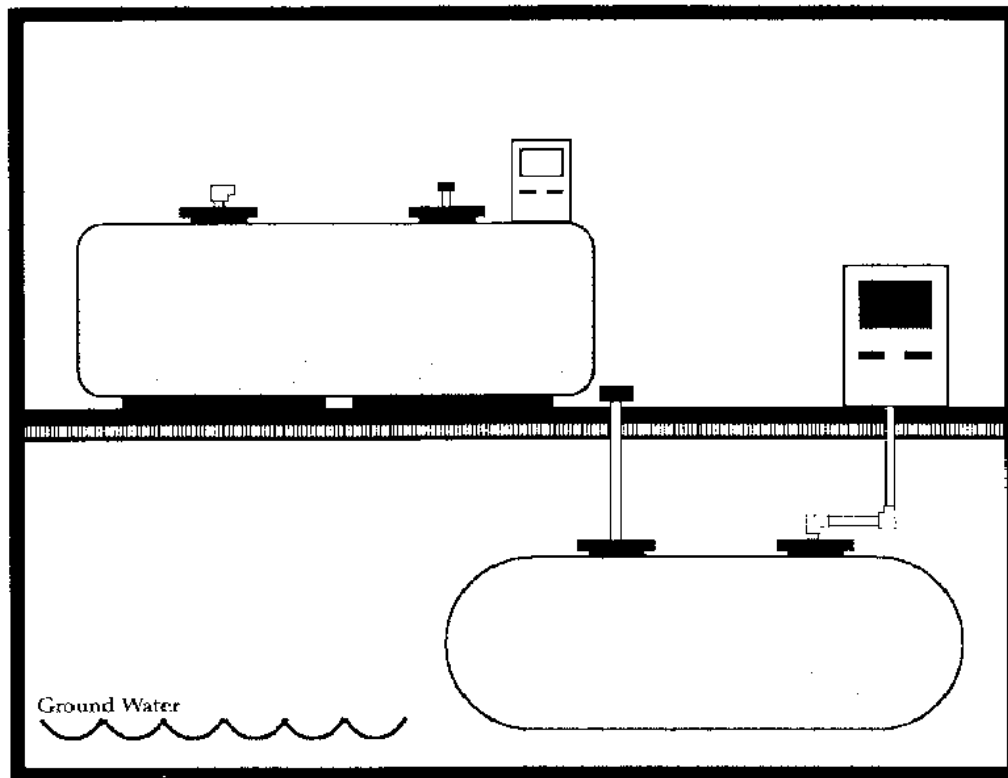




STORAGE TANK MANAGEMENT MANUAL



COMDTINST M5090.9

U.S. Department
of Transportation

United States
Coast Guard



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United States Coast Guard

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Subj: STORAGE TANK MANAGEMENT MANUAL

1. PURPOSE. This Manual prescribes policies and procedures, and provides basic guidance for compliance with storage tank regulations at all applicable Coast Guard shore activities.
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, and commanding officers of headquarters units, shall ensure compliance with the provisions of this Manual.
3. DIRECTIVES AFFECTED. This manual replaces Chapter 12 of COMDTINST M16478.1B.
4. DISCUSSION. Leaking storage tanks can contaminate soil, water, and air. Federal, state and local regulations therefore require specific steps to prevent, detect, or clean up leaks and spills.
5. PROCEDURES. This Manual is directed to unit commanders, facility engineers, and other personnel who are confronted with storage tank management issues that affect their unit. It will serve as an aid in interpreting, implementing, and complying with Federal, state, and local storage tank regulations.

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6. FORM/REPORTS. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, must notify designated state or local agencies of the existence of their tanks. Preparation and submittal of the Notification for Underground Storage Tank, EPA form 7530-1 (11-85) or state equivalent form is discussed in Chapter 2 of this instruction. EPA form 7530-1 (11-85) and/or state equivalent forms are available from the EPA regional and state offices listed in Appendix A.

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CHAPTER 1. INTRODUCTION

A. Background.

1. **Regulations.** Subtitle I of the Hazardous and Solid Waste Amendments (HSWA) of 1984 to the Solid Waste Disposal Act (SWDA) of 1965 established a national regulatory program for managing underground storage tanks (USTs) containing hazardous materials, especially petroleum products. Under this statute and subsequent amendments to the SWDA known as the Resource Conservation and Recovery Act (RCRA), state and local governments are permitted to establish regulatory programs and standards for storage tanks that are more stringent than Federal regulations and we are required to comply with those state and local regulations as well. The Clean Water Act of 1977 revised the Federal Water Pollution Control Act (FWPCA) of 1972 and was amended most recently by the Oil Pollution Act (OPA) of 1990. The CWA regulates discharges of pollutants into all waters of the United States. It is applicable to emergency discharges as well as releases during normal operations. Facilities that could cause substantial harm to the environment if they have a release shall prepare facility response plans which identify personnel and equipment available to respond to a worst case discharge of oil. Planning for emergency spill and releases under the CWA is incorporated in the Spill Prevention Control and Countermeasure (SPCC) Plan. The EPA UST regulations are found in 40 CFR 280. The regulations applicable to SPCC plans are found in 40 CFR 112.3, and the regulations applicable to facility response plans are found in both 40 CFR 112.20 and 33 CFR 154 Subpart F.
2. **Applicability.** RCRA applies to the operation and management of all USTs storing petroleum or hazardous substances. At the present time, RCRA does not have regulations covering the operation and management of petroleum aboveground storage tanks (ASTs). There are however other federal regulations (40 CFR Part 112 and 33 CFR 154) state and local laws which may be applicable to both USTs and ASTs such as SPCC Plans and facility response plans. For guidance on specific federal, state or local storage tank requirements, contact your servicing CEU

3. **Policy.** The USCG's storage tank policy is for units to comply with all applicable Federal, state, and local regulations pertaining to ASTs and USTs. Although heating oil USTs are exempt from 40 CFR 280, some states regulate heating oil tanks depending on certain size criteria. In addition, to minimize the chances of an oil spill and possible costly remediation, it shall be Coast Guard policy that new heating oil USTs comply with the new UST tank specification standards and applicable spill reporting and cleanup requirements.
4. **Hazardous Waste Storage Tanks.** Storage tanks containing hazardous waste are regulated under separate regulations (Subpart J of 40 CFR Part 265) which impose numerous and stringent engineering requirements. For this reason, it is very important that all Coast Guard units containerize any hazardous waste in 55 gallon drums and that the use of USTs or ASTs for the temporary storage of hazardous wastes is to be strictly limited to only those situations where no other practical alternative exists.

B. Acronyms and Glossary of Terms.

1. **AST.** Aboveground Storage Tank. Any one or combination of tanks located aboveground (including any aboveground pipe connected to the tank) that is used to contain an accumulation of regulated substances and that is located at least 90% above the surface of the ground or above the surface of a basement floor
2. **Cathodic Protection.** A form of corrosion protection for steel tanks and piping systems that discharges the natural electric current to a sacrificial anode or otherwise redirects current from damaging the tank body.
3. **Regulated Substance.** Any substance defined in section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C of RCRA), and petroleum, including crude oil. The term "regulated substance" includes but is not limited to motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, or used oils.
4. **Release.** Any spilling, leaking, emitting, discharging, escaping, leaching or disposing into the environment.

5. **Release Detection.** A method of detecting if the contents of a tank have escaped into the environment or into the interstitial space of a double walled UST.
6. **UST.** Underground Storage Tank. Any tank or combination of tanks that are used to contain "regulated substances" whose volume (including underground pipes which are connected to such tanks) is ten percent (10%) or more beneath the surface of the ground. As can be seen in the above definition, a storage tank may in fact be largely above ground, yet still be regulated as an underground storage tank if only 10% of its volume including pipes) is located underground (40 CFR 280.12). This term does not include:
 - ◆ Farm or residential tanks of 1100 gal or less capacity used for storing motor fuel for non- commercial purposes;
 - ◆ Tanks used for storing heating oil for consumptive use on the premises where stored;
 - ◆ Septic tanks;
 - ◆ Surface impoundments, pits, ponds, or lagoons;
 - ◆ Storm water or waste collection systems;
 - ◆ Flow-through process tanks;
 - ◆ Storage tanks situated in an underground area if the storage tank is situated upon or above the surface of the floor such as basements or tunnels;
 - ◆ Tanks holding 110 gal or less; and
 - ◆ Emergency spill and overfill tanks.

C. Responsibilities.

1. Area and district commanders, commanders of maintenance and logistics commands, and commanding officers of headquarters units, shall ensure that their unit commanders comply with applicable Federal, state and local storage tank laws and regulations.
2. CEU Commanding Officers shall provide technical and administrative assistance to units within their AOR to meet the Federal, state and local storage tank requirements.

D. Reporting and Record keeping.

1. Reporting. Units must submit the following information to the implementing agency. All reports submitted shall be routed through the cognizant CEU unless otherwise directed by MLC guidance.
 - ◆ Notification of UST systems (40 CFR 280.22), which includes certification of installation for new UST systems (40 CFR 280.20(e)). Performing reasonable ground inspections and title or other document searches for the presence of any tank which may have been taken out of service since 1974 is crucial in shielding the Cg and individuals from liability should old or abandoned USTs later be discovered on a facility;
 - ◆ Reports of all releases including suspected releases (40 CFR 280.50), spills and overfills (40 CFR 280.53), and confirmed releases (40 CFR 280.61). A spill or overfill of 25 gallons or more of oil into the environment, is a reportable spill and you shall notify your servicing CEU and the appropriate state agency contact. If any oil spill or overfill causes a sheen on nearby surface water you shall also contact the National Response Center (NRC) at 800- 424-8802. This should be done immediately using the most expeditious means possible i.e. telephone call or message. MLC(s) and Commandant (G-ECV-1) should be notified by CEU of any reports of leaking tanks. Note: some states have lower thresholds for reporting. Consult with the Environmental Protection Specialist at your servicing CEU for advice;
 - ◆ Corrective actions planned or taken including initial abatement measures (40 CFR 280.62), initial site characterization (40 CFR 280.63), free product removal (40 CFR 280.64), investigation of soil and ground-water cleanup (40 CFR 280.65), and corrective action plan (40 CFR 280.66); and
 - ◆ Notification prior to permanent closure or change in service (40 CFR 280.71).
2. Recordkeeping. The following records must be maintained at the unit and, upon request, made available to the responsible agency (EPA or authorized state) at any reasonable time.
 - ◆ A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (40 CFR 280.20(a)(4); (40 CFR 280.20(b)(3));

- ◆ Documentation of operation of corrosion protection equipment (40 CFR 280.31);
- ◆ Documentation of UST system repairs (40 CFR 280.33(f));
- ◆ Recent compliance with release detection requirements (40 CFR 280.45); and
- ◆ Results of the site investigation conducted at permanent closure (40 CFR 280.74).

E. Overview Requirements.

1. **Installation.** New UST systems (installed after December 1988) are required to be equipped with leak detection, and spill, overfill and corrosion prevention capabilities. Further, all new systems shall be installed according to nationally recognized industry installation standards. Owners and operators must certify that proper installation procedures were followed and identify how the installation was accomplished.
2. **Upgrading.** Existing substandard UST systems shall be upgraded or closed by December 22, 1998. Upgrading means adding spill, overfill and corrosion protection to existing USTs.
3. **Closure.** The closure of a UST system should follow industry-recommended practices. The Federal UST regulations cite American Petroleum Institute (API) Recommended Practice 1604 for closure procedures for USTs. At the time of closure an assessment shall be made to ensure that a release has not occurred at the site. Corrective action shall be implemented if a leak has in fact occurred.
4. **State Programs.** In general, the requirements of each state must be at least as stringent as the corresponding Federal regulations. Many states also regulate ASTs. Check with your state regulatory agency to find out if any additional requirements apply to ASTs such as registration, notification, performance standards, leak detection, release reporting, and closure. Appendix (A) contains a listing of EPA and State UST Program Contacts.
5. **Checklists.** Use the UST Management Checklist provided in Appendix B and the AST Management Checklist provided in Appendix C to determine if you are complying with the applicable requirements.

CHAPTER 2. NEW AND EXISTING TANK SYSTEMS

- A. Introduction. A brief summary of minimum regulatory requirements for both new and existing tanks, is presented here. The specifications for new USTs apply to all units involved with installation of new underground storage tanks, and associated piping. A summary of the minimum requirements for new and existing USTs is contained in Figure 2-1.
- B. New Tank Systems.
1. **Notification.** A notification form shall be submitted through your servicing CEU to your state within 30 days of installation for any UST brought into operation. Notification is to be made on EPA Form 7530-1 (see Figure 2-2) or equivalent state form.
 2. **Specifications for New Tank Systems.**
 - a. All USTs shall be 360 double walled with interstitial monitoring. Tanks may be:
 - ◆ Fiberglass reinforced plastic double walled;
 - ◆ Steel double walled;
 - ◆ Double walled, steel liner wall with jacketed outer wall; or
 - ◆ Steel, double walled tank with steel inner wall and composite (with glass fiber reinforced plastic exterior bonded to steel) outer wall.
 - b. All ASTs shall be provided with secondary containment such as dikes, berms, curbing, or a substantially equivalent system, designed to contain the entire contents of the tank plus sufficient freeboard to allow for precipitation. Double walled tanks are considered acceptable secondary containment as long as the space between the inner and outer tank walls has enough storage capacity to contain 100% of the inner tank's volume, and the tank is provided with overfill protection.
 - c. Tanks shall be designed to prevent releases due to internal or external corrosion or structural failure for the life of the tank.

- d. Tanks shall be cathodically protected or constructed of non-corrosive materials designed to prevent the release of stored substances.
- e. The material used in constructing or lining tanks shall be compatible with the substance to be stored.
- f. Tanks shall bear the Underwriters Laboratories (UL) label.
- g. Tanks shall be atmospherically vented in accordance with state/local air pollution codes per National Fire Protection Association (NFPA 31). Gasoline tanks shall include a vapor recovery system which collects the vapors during dispensing from gas pumps to vehicles.
- h. Tanks shall comply with NFPA 30, "Flammable and Combustible Liquids Code," and NFPA 31, "Standards for Installation of Oil Burning Equipment."
- i. Tanks and their piping shall be protected against corrosion with the following:
 - (1) A properly engineered, installed, and maintained cathodic protection system that meets the latest edition of the following recognized standards of design, as applicable'
 - ◆ American Petroleum Institute Publication (API) 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems;"
 - ◆ Underwriters Laboratories of Canada (ULC) S603.1M "Standard for Galvanic Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids;"
 - ◆ Steel Tank Institute Standard No. STI-P3, "Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks;"
 - ◆ National Association of Corrosion Engineers Standard RP-01-69 Recommended Practice, "Control of External Corrosion of Underground or Submerged Metallic Piping Systems;"
 - ◆ National Association of Corrosion Engineers Standard RP-02-85 Recommended Practice, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems;" and

- ◆ Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Underground Storage Tanks."
- (2) Corrosion resistant construction materials shall be used, such as special alloys, fiberglass reinforced plastic, fiberglass reinforced plastic coatings, or an equivalent approved system. Selection of the type(s) of corrosion protection to be employed must be based upon the corrosion history of the area; and the judgement of a registered corrosion engineer.

3. **Specifications for Types of Tanks.**

a. Steel Tanks.

- (1) Steel tanks shall be cathodically protected by means of a sacrificial anode(s), or impressed current method of corrosion protection; and or:
 - ◆ A protective coating (such as fiberglass or coating in accordance with STI-P3); or
 - ◆ Isolating the tank from underground metallic structures by use of noncombustible bushings or similar methods that isolate the tank.
- (2) Steel tanks must conform with UL 58, "Standards for Steel Underground Tanks for Flammable & Combustible Liquids."
- (3) Steel tanks must be designed to prevent internal and external corrosion.

b. Glass Fiber Reinforced Plastic Underground Storage Tanks.

- (1) Tanks shall be provided with striker plates under all tank openings, and
- (2) Tanks shall be constructed in compliance with the latest edition of one of the following standards:
 - ◆ American Society for Testing & Materials (ASTM) Specification D4021-86, "Standard Specification Glass Fiber Reinforced Polyester Underground Petroleum Storage Tanks;"

- ◆ UL 1316, "Standards for Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products;" and
 - ◆ Underwriter's Laboratories of Canada CAN4-5615- M83 "Standard for Reinforced Plastic Underground Tanks for Petroleum Products."
- c. Steel/Fiberglass-Reinforced-Plastic Composite Tanks.
- ◆ (1) Tanks shall be constructed in compliance with the latest edition of the following standards:
 - ◆ Underwriter's Laboratories Standard 1746. "Corrosion Protection Systems for Underground Storage Tanks;" or
 - ◆ Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad Underground Storage Tanks."

4. Specifications for Distribution Piping, Valves, and Fittings.

- a. Piping, valves, fittings, and related components must be designed and fabricated from suitable materials that have adequate strength and durability to withstand operating pressure, structural stress, and exposure.
- b. Piping must be installed in accordance with acceptable practices to avoid damage during installation, testing or operation. Material must be compatible with the products stored, and must be installed according to the manufacturer's recommendation.
- c. Distribution piping must be provided with a secondary containment system independent of the storage tank. Secondary containment must be a double wall piping system installed per the manufacturer's recommendation. The secondary pipe system must have a monitoring system to detect leaks independent of tank monitoring.
- d. Provide spill prevention equipment that prevents release of the product if the transfer hose is detached from the fill pipe; provide containment manholes around fill pipes and large enough to contain a volume equal to delivery hose volume (minimum capacity 20 gallons). Provide containment manhole with bypass valve to allow captured product to drain back to tank.

- e. Provide overfill prevention equipment that will automatically shut off flow into the tank when the tank is no more than 95% full. For used oil tanks, provide a high-level alarm that notifies personnel when the tank is 90% full.

5. **Installation.**

- a. Tank and piping systems shall be installed according to manufacturer's recommendations, NFPA 30A, and NFPA 31.
- b. Excavation and trenching shall comply with OSHA construction standard 1926.650. "Excavation, Trenching and Shoring."
- c. Installation of underground systems shall comply with the latest editions of API Publication 1615. "Installation of Underground Storage Systems" or PEI Publication RP100, "Recommended Practices for Installation of Underground Storage Systems."
- d. Certification of installation shall be provided demonstrating that the tank system has been properly installed as follows:
 - ◆ The installer has been certified by the tank and piping manufacturer
 - ◆ The installer has been certified or licensed by the state or local implementing agency as applicable;
 - ◆ The installation has been inspected and certified by a registered professional engineer with education and experience in UST installation;
 - ◆ The installation has been inspected and approved by the state or local implementing agency as applicable; and
 - ◆ The tank system installer has signed a certification indicating that the tanks have been installed in accordance with the manufacturer's checklist.
- e. Waste oil tanks and aviation jet fuel tanks shall be installed aboveground.

C. Existing Tank Systems.

1. **Requirements.** Existing tanks and piping are those installed before December 1988. Leak detection requirements should have been phased in for existing tanks and piping no later than December 1993 depending on their age. If not, you must close your UST or replace it with a new UST or AST. In addition, federal rules require you to make sure your existing USTs have the following by December 22, 1998:
 - a. Corrosion protection for steel tanks and piping.
 - b. Devices that prevent spills and overfills. Check with your state regulatory agency to find out if the state has an earlier deadline or additional requirements
2. **Tank Leak Detection.** You have three basic choices for tank leak detection:
 - a. You can use one (or a combination) of the following monthly monitoring methods:
 - ◆ Automatic tank gauging;
 - ◆ Monitoring for vapors in the soil;
 - ◆ Interstitial monitoring;
 - ◆ Monitoring for liquids on the ground water; and
 - ◆ Other regulatory approved methods.
 - b. If your UST has corrosion protection or internal tank lining and devices that prevent spills and overfills, you can combine monthly inventory control with tank tightness testing every 5 years until December 1998; then do monthly monitoring.
 - c. If your UST does not have corrosion protection or internal tank lining and devices that prevent spills and overfills, you can combine monthly inventory control with annual tank tightness testing until December 1998; then upgrade.
3. **Line Leak Detection.** You have two basic choices of leak detection for piping depending on the type of piping used:

- a. Existing pressurized piping shall have devices to automatically shut off or restrict flow or have an alarm that indicates a leak. In addition, you can either conduct an annual tightness test of the piping or monthly monitoring (using one of the monthly monitoring methods used for tanks except tank gauging).
 - b. Existing suction piping requires either monthly monitoring (using one of the monthly monitoring methods used for pressurized piping) or tightness testing of the piping every three years.
4. **Removal versus Upgrade.** Federal rules require you to choose one of the following actions for an existing UST:
- a. Add spill, overfill, and corrosion protection by December 22, 1998.
 - b. Close your existing UST by December 22, 1998.
 - c. Replace the closed existing UST with a new UST or AST. You should take action as soon as possible. Without the protection provided by upgrading or replacing, your UST is more likely to leak, damage the environment, and leave you with a costly cleanup.
5. **Evaluation.** Existing tank systems should be evaluated to determine if it would be better to replace the system or retrofit fairly new systems to meet Federal regulations for new tank systems. Initial cost, as well as operation and maintenance costs, should be evaluated carefully and the best method chosen.

FIGURE 2-1

WHAT DO YOU HAVE TO DO? Minimum Requirements

You must have Leak Detection, Corrosion Protection, and Spill/Overfill Prevention.

For **WHEN** you have to add these to your tank system, see the chart on the right. →

LEAK DETECTION	
NEW TANKS <i>2 Choices</i>	<ul style="list-style-type: none"> • Monthly Monitoring* • Monthly Inventory Control and Tank Tightness Testing Every 5 Years (You can only use this choice for 10 years after installation.)**
EXISTING TANKS <i>3 Choices</i> <i>The chart at the bottom of the next page displays these choices.</i>	<ul style="list-style-type: none"> • Monthly Monitoring* • Monthly Inventory Control and Annual Tank Tightness Testing (This choice can only be used until December 1998.) • Monthly Inventory Control and Tank Tightness Testing Every 5 Years (This choice can only be used for 10 years after adding corrosion protection and spill/overfill prevention or until December 1998, whichever date is later.)
NEW & EXISTING PRESSURIZED PIPING <i>Choice of one from each set</i>	<ul style="list-style-type: none"> • Automatic Flow Restrictor • Automatic Shutoff Device • Continuous Alarm System • Annual Line Testing • Monthly Monitoring* (except automatic tank gauging)
NEW & EXISTING SUCTION PIPING <i>3 Choices</i>	<ul style="list-style-type: none"> • Monthly Monitoring* (except automatic tank gauging) • Line Testing Every 3 Years • No Requirements (if the system has the characteristics described in the final regulations)
CORROSION PROTECTION	
NEW TANKS <i>3 Choices</i>	<ul style="list-style-type: none"> • Coated and Cathodically Protected Steel • Fiberglass • Steel Tank clad with Fiberglass
EXISTING TANKS <i>4 Choices</i>	<ul style="list-style-type: none"> • Same Options as for New Tanks • Add Cathodic Protection System • Interior Lining • Interior Lining and Cathodic Protection
NEW PIPING <i>2 Choices</i>	<ul style="list-style-type: none"> • Coated and Cathodically Protected Steel • Fiberglass
EXISTING PIPING <i>2 Choices</i>	<ul style="list-style-type: none"> • Same Options as for New Piping • Cathodically Protected Steel
SPILL / OVERFILL PREVENTION	
ALL TANKS	<ul style="list-style-type: none"> • Catchment Basins • Automatic Shutoff Devices • Overfill Alarms • Ball Float Valves
* Monthly Monitoring includes:	Automatic Tank Gauging Vapor Monitoring Interstitial Monitoring Ground-Water Monitoring Other Approved Methods

FIGURE 2-1a

WHEN DO YOU HAVE TO ACT? Important Deadlines

← For WHAT you have to do, see the chart on the left.

TYPE OF TANK & PIPING	LEAK DETECTION	CORROSION PROTECTION	SPILL / OVERFILL PREVENTION
New Tanks and Piping*	At installation	At installation	At installation
Existing Tanks** Installed: Before 1965 or unknown 1965 - 1969 1970 - 1974 1975 - 1979 1980 - December 1988	By No Later Than: December 1989 December 1990 December 1991 December 1992 December 1993	} December 1998	} December 1998
Existing Piping** Pressurized Suction	December 1990 Same as existing tanks	December 1998 December 1998	Does not apply Does not apply
<p>* New tanks and piping are those installed after December 1988 ** Existing tanks and piping are those installed before December 1988</p>			

IF YOU CHOOSE TANK TIGHTNESS TESTING AT EXISTING USTs . . .

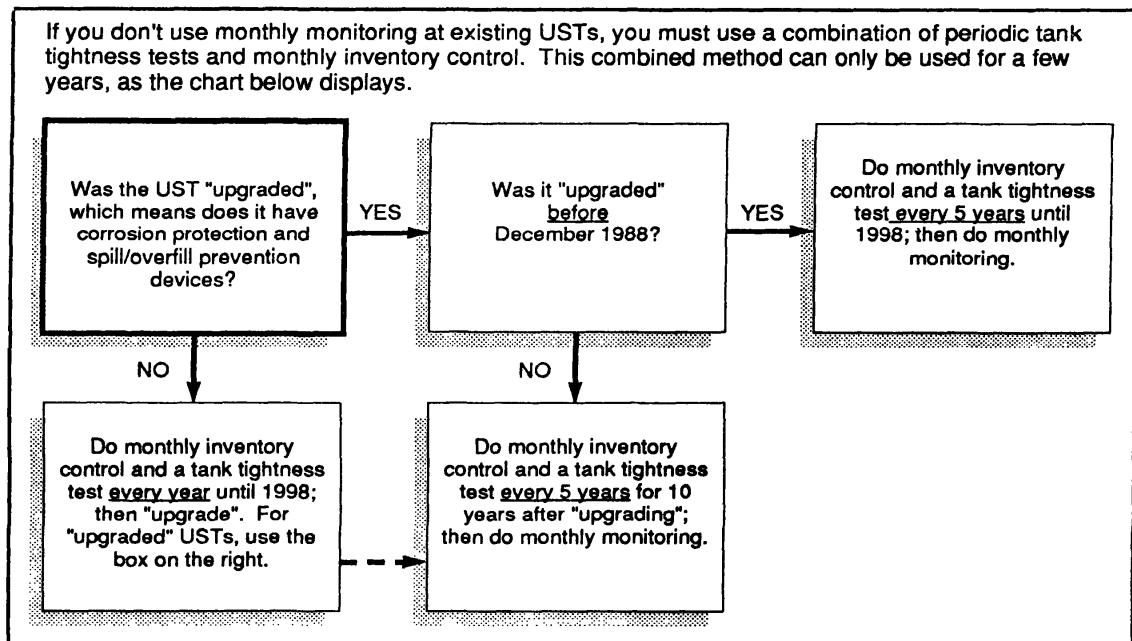


FIGURE 2-2a

Notification for Underground Storage Tanks		FORM APPROVED OMB NO. 2008-0049 APPROVAL EXPIRES 6-30-88
	STATE USE ONLY	
	I D Number	
	Date Received	
GENERAL INFORMATION		
<p>Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.</p> <p>The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.</p> <p>Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means — (a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances; and (b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.</p> <p>What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10³, or more beneath the ground. Some examples are underground tanks storing 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.</p> <p>What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are: 1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes, 2. tanks used for storing heating oil for consumptive use on the premises where stored, 3. septic tanks, 4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws, 5. surface impoundments, pits, ponds, or lagoons, 6. storm water or waste water collection systems, 7. flow-through process tanks, 8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations, 9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.</p> <p>What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is held at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).</p> <p>Where To Notify? Completed notification forms should be sent to the address given at the top of this page.</p> <p>When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.</p> <p>Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.</p>		
INSTRUCTIONS		
Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 3 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.		Indicate number of continuation sheets attached <input style="width: 40px; height: 20px;" type="text"/>
I. OWNERSHIP OF TANK(S)	II. LOCATION OF TANK(S)	
Owner Name (Corporation, Individual, Public Agency, or Other Entity) _____ Street Address _____ County _____ City _____ State _____ ZIP Code _____ Area Code _____ Phone Number _____ Type of Owner (Mark all that apply <input checked="" type="checkbox"/>) <input type="checkbox"/> Current <input type="checkbox"/> State or Local Gov't <input type="checkbox"/> Private or Corporate <input type="checkbox"/> Former <input type="checkbox"/> Federal Gov't (GSA facility I.D. no. _____) <input type="checkbox"/> Ownership uncertain	(If same as Section I, mark box here <input type="checkbox"/>) Facility Name or Company Site Identifier, as applicable _____ Street Address or State Road, as applicable _____ County _____ City (nearest) _____ State _____ ZIP Code _____ Indicate number of tanks at this location <input style="width: 40px; height: 20px;" type="text"/>	
Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands <input type="checkbox"/>		
III. CONTACT PERSON AT TANK LOCATION		
Name (If same as Section I, mark box here <input type="checkbox"/>)	Job Title	Area Code Phone Number
IV. TYPE OF NOTIFICATION		
<input type="checkbox"/> Mark box here only if this is an amended or subsequent notification for this location.		
V. CERTIFICATION (Read and sign after completing Section VI.)		
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.		
Name and official title of owner or owner's authorized representative	Signature	Date Signed
CONTINUE ON REVERSE SIDE		

FIGURE 2-2b

Owner Name (from Section I) _____ Location (from Section II) _____ Page No. _____ of _____ Pages

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)					
Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input type="checkbox"/>) Currently in Use Temporarily Out of Use Permanently Out of Use Brought into Use after 5/8/86	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Estimated Age (Years)					
3. Estimated Total Capacity (Gallons)					
4. Material of Construction (Mark one <input type="checkbox"/>) Steel Concrete Fiberglass Reinforced Plastic Unknown Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Internal Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection Interior Lining (e.g., epoxy resins) None Unknown Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. External Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection Painted (e.g., asphaltic) Fiberglass Reinforced Plastic Coated None Unknown Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Piping (Mark all that apply <input type="checkbox"/>) Bare Steel Galvanized Steel Fiberglass Reinforced Plastic Cathodically Protected Unknown Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input type="checkbox"/>) a. Empty b. Petroleum Diesel Kerosene Gasoline (including alcohol blends) Used Oil Other, Please Specify _____ c. Hazardous Substance Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input type="checkbox"/> if tank stores a mixture of substances d. Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) b. Estimated quantity of substance remaining (gal.) c. Mark box <input type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CHAPTER 3. LEAK DETECTION

A. Leak Detection Methods.

1. **Regulations.** The Federal UST regulations require that owners and operators of new and existing UST systems provide a method, or a combination of methods, of release detection that (1) can detect a release from any portion of the tank and connected piping that routinely contain product; (2) is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions; and (3) meets the specific performance requirements for each release detection method. New UST systems and existing systems equipped with corrosion protection and spill/overflow protection need to be monitored monthly for releases using a leak effects monitoring system or receive a tank tightness test at least every five years. Nonupgraded systems can be monitored using the monthly leak detection system or a combination of annual tank tightness testing with monthly inventory control until the systems are upgraded. ASTs are required to undergo periodic integrity testing (40 CFR 112.7(e)(2)(vi)). In addition, the outside of the AST must routinely be observed by facility personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside containment areas.
2. **Classes.** Two general classes of leak detection methods exist: tank system testing (performed inside the tank) and leak effects monitoring (performed outside the tank). In addition, reconciliation of inventory records is a crude leak detection method that can signal the loss of stored product possibly caused by a tank leak.

B. Tank System Testing.

1. **Volumetric Test.** Tank system testing is performed inside the tank and involves two types of tests: volumetric and nonvolumetric. Volumetric testing detects leaks based on a measured change in volume of the product stored in the tank. The change in volume can be determined by measuring parameters associated with volume change, such as changes in liquid level, temperature, pressure, or density. Volumetric testing methods can determine whether the tank is leaking, at what rate it is leaking, and sometimes where the leak is located. The Federal UST regulations establish a performance standard for tank tightness testing. A tank tightness test must be capable of detecting a 0.1 gal/hr leak rate from any portion of the tank that routinely contains product while accounting for the effect of thermal expansion/contraction, vapor pockets, tank deformation, and the location of the water table.

2. **Nonvolumetric Test.** Nonvolumetric tank tests determine the presence of a tank leak by qualitative measurements such as differential pressure loss in the tank being tested. Other nonvolumetric testing methods include detection of a tracer gas that has been mixed with the stored product and detection of the bubbling sound caused by stored product leaking from the tank. Nonvolumetric tests are not specifically cited in the Federal UST regulations. However, there is a general leak detection method performance standard of 0.2 gal/hr or 150 gal within a month for other leak detection methods. Integrity testing for ASTs should include such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing
3. **Variables.** The capability of tank-testing methods to accurately measure rates of tank leakage is affected by many variables. Variables are related to (1) the test equipment, such as instrumentation accuracy and operator error; (2) the storage tank, such as vapor pockets and tank deformation; and (3) the tank surroundings, such as temperature, water table depth, and ground vibration. All commercially available tank-testing methods take into consideration these variables and are designed to reduce or eliminate the variables' effect on test results. During a volumetric tank test, the variable that most adversely affects test accuracy is temperature change. Most USTs store petroleum products that expand and contract with a change in product temperature. Product expansion may cover up a tank leak, while product contraction may falsely register as a tank leak. Nonvolumetric tank testing methods, on the other hand, often rely on the detection of a tracer; variables such as a high water table can prevent the exit of tracer gas from the tank and can hinder the accuracy of a nonvolumetric tank test. If a tank test indicates that the tank is leaking, it may be advantageous to retest the tank, using a different test method, if possible, to confirm the tank's leak.

C. Leak-Effects Monitoring

1. **General.** Outside the tank, leak-effects monitoring provides continuous surveillance of tank backfill to detect early leaks and to investigate the source of a leak or a spill. Leak-effects monitoring usually requires the drilling of small holes or wells and installing monitoring casings to set up the monitoring equipment. Although this method of leak detection provides continuous monitoring of the tank area, it generally cannot determine the leak rate or the leak location on the tank.

2. **Types.** Vapor monitoring, groundwater monitoring, and interstitial monitoring (tanks with secondary containment) are three types of "leak-effects" monitoring systems cited in the Federal UST regulations. Performance standards for each method are detailed in the regulations. Generally, vapor monitoring systems must be able to detect any significant increase in concentration of the stored substance above background concentrations. The system must not be rendered inoperative by groundwater, rainfall, or soil moisture. Groundwater monitoring can only be used when the stored substance is immiscible in water and has a specific gravity of less than one. Groundwater should always be within 20 ft of the ground surface for the system to provide adequate leak detection. The use of secondary containment with interstitial monitoring involves a barrier outside the primary tank with a release detection device between the inner and outer barriers. The space between the barriers is called the interstitial space. The outer wall contains the leak long enough for it to be detected by the monitoring system. This system is considered to be the most protective of the environment because leaks are generally detected before they can contaminate the environment
3. **Policy.** All new USTs shall be 360 double walled with interstitial monitoring.

D. Inventory Reconciliation

1. **General.** Inventory reconciliation of storage tank contents is an accounting procedure that entails performance of product recordkeeping, performance of regular inspections and measurements, and recognition of the conditions that indicate leaks. It is the first step in discovering the possibility of a tank leak. Although inventory reconciliation will not locate the leak, it will indicate if the inventory records show an imbalance that may be caused by a tank leak. EPA regulations do not require inventory reconciliation of ASTs, however several states require AST inventory reconciliation. Check with your state and local regulating authority for more specific guidance
2. **Procedures**
 - a. Develop and maintain an inventory control system for each metered tank in accordance with 40 CFR 280.43(a). A suggested format is provided in Figure 5-2 of Chapter 5. In addition API Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets" may also be used as guidance.

- b. The inventory control must be conducted on a monthly basis as specified in 40 CFR 280.43(a).
- c. In the event the inventory cannot be reconciled, (1.0% of throughput plus 130 gallons in any 30 day period) notify your servicing CEU the next business day.

E. Pipeline Testing

1. **Regulations.** The Federal UST regulations require pressurized piping that conveys regulated substances be equipped with an automatic line leak detection. Additionally, pressurized piping is required to receive an annual line tightness test or have a monthly monitoring (e.g., groundwater monitoring). Underground piping that conveys regulated substances under suction must receive a line tightness test at least every 3 years or use a monthly monitoring method.
2. **Detection Systems.** The EPA UST regulations require that automatic line leak detectors be capable of detecting a release of 3 gal/hr at 10 psi line pressure within 1 hr. Two commercially available automatic line leak detection systems that meet this performance standard are flow restrictors and flow shut-off devices. A flow restrictor monitors the line pressure after the dispenser is turned on and severely limits the flow of product if a leak is detected. An automatic shut-off system monitors pressure changes when the dispenser is shut off. If a pressure drop indicative of a leak is detected, the pump is shut off. These devices can be installed on most existing and new UST systems.

CHAPTER 4. TANK SYSTEM CLOSURE

A. General.

1. **Regulations.** USCG policy on the closure of storage tanks that are no longer in service shall be based on Federal, state and local regulations. Although there are no federal regulations for AST closure, several states have established specific closure requirements that include removal of all liquid and sludge from the tank and piping and removal of pollutant vapors. In addition, a closure assessment may be required for ASTs without secondary containment. The Federal UST regulations in 40 CFR Part 280 establish procedures for the closure of UST systems. UST systems taken out-of-service for less than 3 months must continue to be operated and maintained in accordance with the corrosion protection requirements. A UST system that is empty (all materials have been removed and no more than 1 inch of residue or 0.3 percent by weight of the total UST system capacity remain) does not require leak detection. UST systems temporarily taken out-of- service for 3 months or more must also have the vent lines maintained and all other lines capped and secured. UST systems taken out-of-service for more than 12 months must be permanently closed unless the system either meets the new performance standards or the upgrading requirements.
2. **Notification.** Regulations for permanent closure require that the implementing agency be notified of the intent to permanently close a tank, and the UST site must be examined for detection of releases. Tank tightness testing, soil gas monitoring, and groundwater monitoring are several potential methods for determining whether releases have occurred before the removal of the tank or the filling of the tank with an inert solid material. Check with your state to determine if notification is required for AST closure.
3. **Procedures.** Federal UST regulation cite the API Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks." The API developed these tank closure procedures to be consistent with other API publications and guidance provided by the NFPA codes and standards. Although each state's requirements may be different, the following procedures for in-place abandonment and removal of storage tanks represent a sound technical approach for permanent tank closures. These procedures are basic guidelines and should be adjusted based on site-specific conditions, type of tank (UST or AST) and the particular requirements of the implementing agency.

- B. Storage Tank Closure In-Place. In-place closure is not recommended unless removal will affect the structural integrity of adjacent structures. Procedures for storage tank closure in-place should be completed in the following order:
1. Contact your state and local regulator to determine if permits are required and if specific procedures must be followed for the AST or UST closure.
 2. Drain and flush all product from the piping into the tank.
 3. Remove all liquids and residues from the tank by using explosion-proof or air-driven pumps.
 4. Excavate to the top of the underground tank.
 5. Remove the drop tube, fill pipe, gauge pipe, vapor recovery truck connection, submersible pumps, and other tank fixtures. Cap or remove all nonproduct lines, such as vapor recovery lines, except for the vent line. The vent line should remain connected at this time.
 6. Purge the tank of flammable vapors. Various methods include the use of an inert gas such as CO₂ or N₂, solid dry ice, vapor ventilation using an eductor-type air mover or diffused air blower, water flushing or steam cleaning. CAUTION: Each purging technique requires the use of particular safety precautions. Refer to API Recommended Practice 1604.
 7. Vent all vapors a minimum of 12 ft above grade and 3 ft above adjacent roof lines. Monitor the tank for flammable vapor with a combustible gas indicator. The work area should be free from sources of ignition.
 8. If necessary, cut one or more holes in the tank top.
 9. Begin to fill the tank with sand or other inert material.
 10. As the cone of inert material nears the top of the tank, mix in a nominal amount of water to allow it to flow to the ends of the tank. Continue until the tank is full and overflows the fill opening(s).
 11. Disconnect and cap or remove the vent line.
 12. Maintain permanent records of the tank location, the date of closure/disposal in place, and the method of tank closure/disposal.

- C. Storage Tank Removal. Procedures for storage tank removal should be completed in the following order:
1. Contact your state and local regulator to determine if permits are required and if specific procedures must be followed for the AST or UST removal.
 2. Drain product piping into the tank. Cap or remove product piping.
 3. Remove all liquids and residues from the tank by using explosion-proof or air-driven pumps.
 4. Excavate to the top of the underground tank.
 5. Remove the fill pipe, gauge pipe, vapor recovery truck connection, submersible pumps, and other tank fixtures. Remove the drop tube unless vapors are to be exhausted by tank ventilation. Cap or remove all nonproduct lines, such as vapor recovery lines, except for the vent line. The vent line should remain connected at this time.
 6. Purge the tank of flammable vapors. Various methods include the use of an inert gas such as CO₂ or N₂, solid dry ice, vapor ventilation using an eductor-type air mover or diffused air blower, water flushing or steam cleaning. CAUTION: Each purging technique requires the use of particular safety precautions. Refer to API Recommended Practice 1604.
 7. Vent all vapors a minimum of 12 ft above grade and 3 ft above adjacent roof lines. Monitor the tank for flammable vapor with a combustible gas indicator. The work area should be free from sources of ignition.
 8. After removal of vapors, plug or cap all tank openings and install a 1/8-in. plug vent.
 9. Excavate and remove the tank. Use wood blocks to prevent tank movement before transport.
 10. Properly dispose of any contaminated backfill encountered.
 11. Label the tank to indicate the former contents of the tank, the present vapor state, and the removal date. Also indicate whether the tank contained leaded motor fuels.
 12. Before removal, ensure that tank atmosphere does not exceed 20% of lower flammable limit.

13. Dispose of the tank in accordance with local, state, and Federal regulations. It is recommended that the tank be turned into the local DRMO for scrap or disposal.

D. Other Related Guidelines. In addition to those for the abandonment and removal of storage tanks, guidelines have been established by API on the storage of used tanks, their sale or reuse, and junking. Criteria for these items can be found in API 1604. Other references that may provide useful guidance related to tank removal include:

- ◆ NFPA No. 30: "Flammable and Combustible Liquids Code;"
- ◆ NFPA No. 30A: "Automotive and Marine Service Station Code;"
- ◆ NFPA No. 327: "Standard Procedure for Cleaning or Safeguarding Small Tanks and Containers;"
- ◆ NFPA No. 329: "Underground Leakage of Flammable and Combustible Liquids;" and
- ◆ API 2015: "Cleaning Petroleum Storage Tanks."

CHAPTER 5. SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

- A. Introduction. Many CG facilities store and transfer oil and petroleum products, and are classified as non- transportation-related facilities, defined as facilities which primarily involve bulk fuel transfer to on-site vehicles or are fixed facilities (i.e., oil storage tanks). Facilities that could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the U.S. or adjoining shorelines, are required to prepare a SPCC plan in accordance with 40 CFR 112.7.
- B. SPCC Plan Requirements.
1. SPCC plans are required if one of the following criteria are met:
 - ◆ Aggregate aboveground oil storage capacity greater than 1,320 gallons;
 - ◆ Any single aboveground oil storage container with a capacity greater than 660 gallons; or
 - ◆ Total underground oil storage capacity greater than 42,000 gallons.
 2. The SPCC plan must be certified by a Registered Professional Engineer before it can be implemented. Contact your servicing CEU for assistance in developing a SPCC plan and obtaining the required Professional Engineer review and certification.
 3. The SPCC plan must be amended whenever there is a change in facility design, construction, operation, or maintenance which materially affects a facility's potential for discharging oil into the waters of the United States (i.e., aboveground storage tank addition/removal, changes to base drainage systems, addition of new aircraft/vessel etc.). Amendments must be made within six months after it has been determined that a change is required. In addition, the SPCC Plan must be reviewed and evaluated at least once every three years (40 CFR 112.5).

4. Once the SPCC Plan has been prepared and certified, it must be maintained at the facility and made available to the EPA, state, and local regulatory agencies upon request.
5. The required contents of SPCC plans are described only in general terms in the regulations themselves. Figure 5-1 provides a suggested outline and contents which will assist you in developing a unit SPCC plan.

FIGURE 5-1

SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN OUTLINE

I. DESCRIPTION OF THE FACILITY.

This section should include a detailed description of the facility, including as a minimum, the location of oil tanks and other storage areas, fueling facilities and equipment, (i.e. fueling stations, pumps, piping, etc.), facility drainage, systems, containment systems, and emergency equipment. For each tank provide capacity, content, estimated monthly throughput, construction material, method of secondary containment or leak detection etc. The proximity of oil storage areas and tanks to the drainage systems should be discussed. A site plan showing the location of these items is required. For units which have experienced a reportable spill, include a description of the spill, corrective action taken, and steps taken to prevent future spills.

II. DESCRIPTION OF NORMAL OIL AND FUEL TRANSFER PRACTICES.

Provide a detailed description of the procedures followed when transferring fuel and other oils to prevent spillage from entering the waterways. Include items such as plugging nearby drains, overfill protection methods, emergency pump shut-off procedures, etc. This requirement applies to transfer procedures from suppliers to the unit and from unit storage areas to end consumers.

III. DESCRIPTION OF EMERGENCY PROCEDURES.

- A. Describe in as much detail as is practicable, the initial response that personnel are to take to ensure that the amount of spilled oil allowed to enter a waterway is minimized. This should be broken down for each individual storage location. Include in this discussion such items as damming of storm drains, blocking drainage trenches, temporary curbing, sorbent material, etc.
- B. Describe Reporting procedures. List and post the following emergency numbers: 1) National Response Center (NRC) (1-800 424-8802); 2) Servicing MSO/MSD; 3) State emergency numbers, if required by the state; 4) local emergency numbers. State where emergency numbers are posted.

FIGURE 5-1 (cont'd)

- C. Response Personnel.
 - 1. Names (with associated duties and responsibilities)
 - 2. Current home and business telephone numbers
 - 3. Qualifications/training information

- D. Emergency Equipment.
 - 1. Type of equipment (include an inventory)
 - 2. Location (incorporate into section I and reference here)
 - 3. Evaluate the estimated containment and/or recovery capacity of emergency response equipment.

- E. Procedure for requesting assistance from off-site (MSO, strike team, CEU, local response, etc.)

IV. SECURITY.

Provide a description of the measures taken to insure that fuel/ oil tanks, valves, transfer pumps, fueling stations, oil storage drums, etc. are properly protected from external threat. Simply being on a secure base is not enough of a measure to ensure the security of oil storage areas. Additional fenced areas with limited access, padlocked fueling equipment or storage tanks, or other adequate measures are required. 40 CFR 112.7(e)(9) indicates the minimum security requirements for oil storage facilities, tank valves, pumps, etc.

V. RECORDKEEPING.

In this section, you should describe the system of records you intend to use in order to monitor your fuel/oil activities and meet the reporting and recordkeeping requirements of the various environmental regulations. Also indicate where records will be maintained at the unit. Records shall be maintained at the unit or a minimum of five years. Include as a minimum:

- A. Inventory Records. Inventory shall be verified on at least a monthly basis with entries made for each day that fuel/oil is dispersed and/or received. Figure 5-2 provides a blank sample inventory control record, Figure 5-2a provides a sample completed inventory. Verification of monthly inventory records shall be made by the unit Commanding Officer or Officer-in-Charge. The "Actual Volume on Hand" should be determined using soundings, sight glass, or other gauging means.

FIGURE 5-1 (cont'd)

- B. Inspection Records. Physical inspections shall be conducted on at least a quarterly basis. These inspections should concentrate on the condition of above ground tanks, piping, valves, hoses, meters, pumps, containment systems, emergency response equipment, and security precautions. Use the checklist provided in Figure 5-3 as a guideline for these inspections. Each command is encouraged to develop their own inspection sheet to address unit specific conditions.
- C. Reports of Releases or Incidents. Any release that is reported to the NRC or local authorities should be documented by the command. Retain this information and incorporate it into section I of future SPCC Plans.

Incorporate by reference other required documents such as RCRA contingency/emergency plans, fire bills, etc. There is no need to duplicate effort but there is a need to integrate all levels of preparedness. However, note that there are significant differences in the materials covered by the RCRA contingency/emergency plan and the SPCC Plan. Ensure that petroleum product recordkeeping is adequately addressed.

VI. TRAINING:

- A. 40 CFR 112.2(e)(10) does not provide specific guidelines for the contents of training in spill prevention or countermeasures, however, it does require that training be conducted. Training shall be conducted at least annually for all personnel who have a need to implement any part of this plan. As a minimum, training shall include procedures to be followed for: 1) Recordkeeping, 2) Inspection, 3) Maintenance, 4) Oil and fuel transfer, 5) Emergency response, 6) Unit specific topics as determined by the Commanding Officer or Officer-in-Charge.
- B. Designated personnel who are expected to participate in a coordinated emergency response effort must be given training in accordance with the duties and functions performed as described in 29 CFR 1910.120(q)(6). Units which evacuate their personnel from the worksite location when an emergency occurs and who do not permit any personnel to assist in handling the emergency are exempt from the emergency response plan requirements if they provide an emergency action plan in compliance with 29 CFR 1910.38 (a).
- C. Records must be kept for all training provided. These records may be included with and considered as a part of the RCRA training requirement.

FIGURE 5-2a

INVENTORY CONTROL RECORD FOR

U. S. COAST GUARD _____
(UNIT)

MONTH _____ YEAR _____

DATE	DESCRIPTION	VOLUME (+/-)	ESTIMATED TOTAL VOLUME
01/01/99	Beginning Inventory		2000.5
01/05/99	Transfer to CG 44234	- 500.2	1500.3
01/06/99	Receipt from Exxon	+ 1000.0	2500.3
01/16/99	Transfer to CG 22345	- 50.2	2450.1
01/31/99	Estimated Ending Balance		2450.1

Actual Volume on Hand (End of Month): _____ 2440.0
 Discrepant Volume _____ 10.1

Discussion: Approximately 10 gallons of fuel spilled on 10/05
and was contained and cleaned immediately. No fuel reached
waterway.

Submitted: _____
 Signature

 Date

Verified: _____
 Signature

 Date

FIGURE 5-3
SPCC INSPECTION FORMAT

1. Inspect all above ground tanks and associated piping, valves, hoses, meters, pumps and containment structures and drainage systems for rust, unusual wear, cracking, or other signs of deterioration. Record the conditions as SAT/UNSAT below:

	TANK #1	TANK #2	TANK #3	TANK #4	TANK #5
CONTENTS					
VOLUME					
PIPING					
VALVES					
PUMPS/METERS					
HOSES					
CONTAINMENT STRUCTURE					
CONTAINMENT DRAINAGE					

For all items marked "UNSAT", provide comments: _____

2. Are all valves which could release oil or contaminated water locked in the closed position? If "NO" explain why.

3. Is there evidence of excessive loss of fuel or oil during transfer operations?

4. Are security measure sufficient to protect oil tanks and storage areas from external threat? If not, initiate appropriate action.

5. Is emergency response equipment inventory adequate, in good condition, easily accessible by authorized persons, and sufficiently secure from access by unauthorized persons?

6. Is the drainage log for secondary containment structures properly maintained and up to date?

7. Are there any potential oil spill problem areas which require immediate attention?

If so, initiate appropriate action.

FIGURE 5-3a

8. Is there any long range improvement, replacement, or repair required/requested by the unit?

If so, has a SSMR been submitted to initiate action?

9. Was SPCC training held this quarter?

If so, please describe briefly.

10. Has any underground piping been uncovered for any purpose and inspected during this quarter?

If so, explain reasons and findings.

Comments: _____

Submitted: _____
Signature

Date

Approved: _____
Signature

Date

CHAPTER 6. FACILITY RESPONSE PLAN

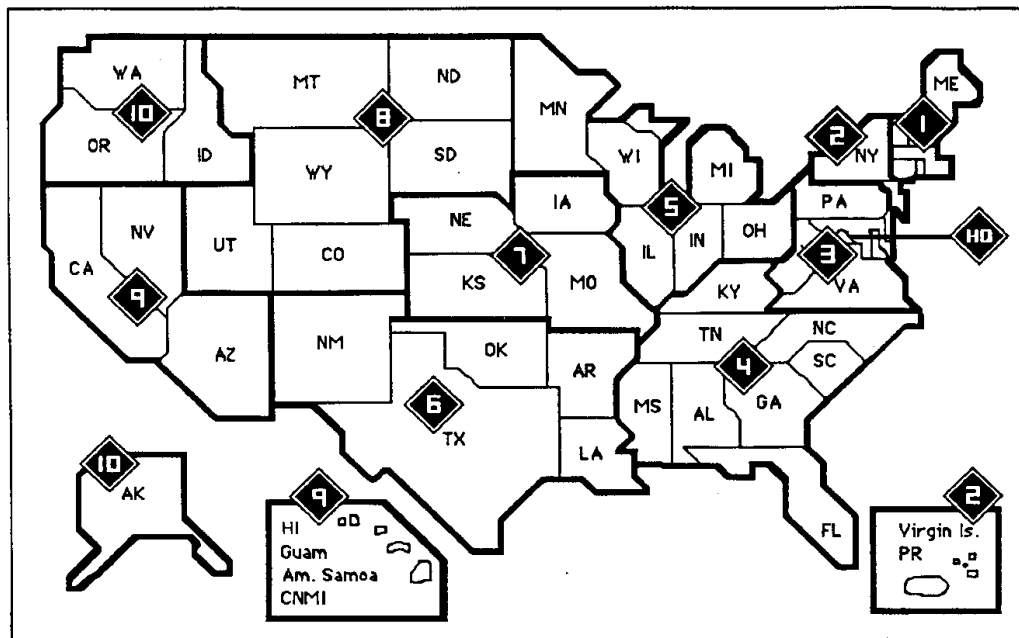
- A. Introduction. USCG regulation 33 CFR 154 Subpart F requires every facility which transfers oil in bulk to or from a vessel having an onboard storage capacity of 250 barrels of oil (10,500) gallons or greater to prepare and submit a facility response plan to the cognizant Captain of the Port (COTP). In addition, EPA regulation 40 CFR 112.20 requires every facility which transfers oil over water to or from vessels (any size boats or cutters) and has a total oil storage capacity (UST or AST) greater than or equal to 42,000 gallons to prepare and submit a facility response plan to EPA. A unit may need to prepare and submit facility response plans to both the COTP and EPA. To avoid duplication of effort, Cg facilities may prepare one response plan if they are regulated by both EPA and the USCg, and submit the integrated plan to both EPA and the COTP.
- B. Facility Response Plan Requirements.
1. The Oil Pollution Act of 1990 requires facility response plans to:
 - a. be consistent with the requirements of the National Contingency Plan and the relevant area contingency plan;
 - b. identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate Federal official and the persons providing personnel and equipment in accordance with paragraph (c);
 - c. identify, and ensure by contract or other approved means the availability of personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
 - d. describe the training, equipment testing, periodic unannounced drills, and response actions of persons at the facility, to be carried out under the plan to ensure the safety of the facility and to mitigate the discharge, or the substantial threat of a discharge;

- e. be updated periodically; and
 - f. be resubmitted for approval of each significant change.
2. A complete listing of the USCg and EPA regulations and response plan format are contained in COMDTNOTE 16478, Facility Response Plans. If you need further technical assistance contact your COTP or servicing CEU.

APPENDIX A

**U.S. Environmental Protection Agency
Office of Underground Storage Tanks**

Regional and State UST/LUST Program Contacts



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 FTS 255-6755

State UST/LUST Program Offices

<p>AK UST/LUST CONTACT² AK Dept. of Environmental Conservation Contaminated Sites 410 Willoughby Avenue, Suite 105 Juneau, AK 99801-1795 907-465-5250</p>	<p>FL UST/LUST CONTACT² FL Dept. of Environmental Regulation Tank Section Twin Towers Office Building - Rm 403 2600 Blair Stone Road Tallahassee, FL 32399-2400 904-488-3935</p>	<p>KY UST/LUST CONTACT¹ KY Division of Waste Management Underground Storage Tank Branch 18 Reilly Road Frankfort, KY 40601 502-564-6716</p>
<p>AL UST/LUST CONTACT AL Dept. of Environmental Management Ground-Water Section/Water Division 1751 Congressman W. L. Dickinson Dr. Montgomery, AL 36130 UST: 205-271-7986 LUST: 205-271-7834</p>	<p>GA UST/LUST CONTACT¹ GA Department of Natural Resources Underground Storage Tank Mgmt. Prog. 4244 International Parkway, Suite 100 Atlanta, GA 30354 404-362-2687</p>	<p>LA UST/LUST CONTACT² LA Dept. of Environmental Quality Underground Storage Tank Division P.O. Box 82178, 7290 Bluebonnet Baton Rouge, LA 70884-2178 504-765-0243</p>
<p>AR UST/LUST CONTACT¹ AR Dept. of Pollution Control & Ecology Regulated Storage Tank Division P.O. Box 8913, 72219-8913 8001 National Drive Little Rock, AR 72219-8913 501-562-6533</p>	<p>HI UST/LUST CONTACT¹ HI Department of Health Solid and Hazardous Waste Branch 500 Ala Moana Blvd., Suite 250 Honolulu, HI 96813-4913 808-586-4230</p>	<p>MA UST CONTACT MA Department of Public Safety Underground Storage Tank Program P.O. Box 490, East Street, Bldg #5 Tewksbury, MA 01876 508-851-9813</p> <p>LUST CONTACT MA Dept. of Environmental Protection One Winter Street Boston, MA 02108 617-556-1044</p>
<p>AZ UST/LUST CONTACT² AZ Department of Environmental Quality 3033 North Central Avenue Phoenix, AZ 85004 602-257-6984</p>	<p>IA UST/LUST CONTACT¹ IA Department of Natural Resources Henry A. Wallace Building 900 East Grand Des Moines, IA 50319 515-281-8135</p>	<p>MD UST/LUST CONTACT¹ MD Department of Environment Hazardous & Solid Waste Mgmt. Admin Underground Storage Tank Program 2500 Broening Highway Baltimore, MD 21224 410-631-3442</p>
<p>CA UST/LUST CONTACT CA State Water Resources Control Board Division of Clean Water Program 2014 T Street (P.O. Box 944212, Zip: 94244-2120) Sacramento, CA 95814 UST: 916-739-4436 LUST: 916-739-4317</p>	<p>ID UST/LUST CONTACT² ID Department of Health & Welfare ID Division of Environmental Quality 1410 North Hilton Boise, ID 83706 208-334-5860</p>	<p>ME UST/LUST CONTACT¹ ME Dept. of Environmental Protection State House - Station 17 Hospital Street, Ray Building Augusta, ME 04333 207-289-2651</p>
<p>CO UST CONTACT CO State Oil Inspection Office 1001 East 62nd Avenue, Room A1 Denver, CO 80216 303-289-5643</p> <p>LUST CONTACT CO Department of Health Hazardous Materials & Waste Mgmt. Div Underground Storage Tank Program 4210 East 11th Avenue Denver, CO 80220 303-331-4864</p>	<p>IL UST CONTACT IL Office of State Fire Marshal Division of Petroleum & Chemical Safety 1035 Stephenson Dr. Springfield, IL 62703 217-785-5878</p> <p>LUST CONTACT IL EPA, Bureau of Land Div. of Remediation Mgmt., LUST Section P.O. Box 19276 Springfield, IL 62794-9276 217-782-6760</p>	<p>MI UST CONTACT MI Department of State Police Fire Marshal Division P.O. Box 30157 Lansing, MI 48909 517-322-1935</p> <p>LUST CONTACT MI Department of Natural Resources Leaking Underground Storage Tank Unit P.O. Box 30028 Lansing, MI 48909 517-373-8168</p>
<p>CT UST/LUST CONTACT² CT Dept. of Environmental Protection Underground Storage Tank Program 165 Capitol Avenue Hartford, CT 06106 203-566-4630</p>	<p>IN UST CONTACT IN Dept. of Fire and Services Office of the State Fire Marshal 402 West Washington Street Room C241 Indianapolis, IN 46204 317-232-2222</p> <p>LUST CONTACT IN Dept. of Environmental Management Office of Environmental Response 2321 Executive Drive Indianapolis, IN 46241 317-243-5110</p>	<p>MN UST/LUST CONTACT MN Pollution Control Agency Underground Storage Tank Program 520 Lafayette Road North St. Paul, MN 55155-3898 UST: 612-297-8609 LUST: 612-297-8574</p>
<p>DC UST/LUST CONTACT² DC Environmental Regulatory Admin. Underground Storage Tank Branch 2100 Martin Luther King Ave. S.E. Suite 203 Washington, D.C. 20020 202-404-1167</p>	<p>KS UST/LUST CONTACT KS Department of Health & Environment Bureau of Environmental Remediation Underground Storage Tank Section Forbes Field, Building 740 Topeka, KS 66620-0001 UST: 913-296-1685 LUST: 913-296-1684</p>	<p>MO UST CONTACT MO Department of Natural Resources Water Pollution Control Program P.O. Box 176 Jefferson City, MO 65102 314-751-6822</p> <p>LUST CONTACT MO Department of Natural Resources Environmental Services Program P.O. Box 176 Jefferson City, MO 65102 314-526-3349</p>
<p>DE UST/LUST CONTACT² DE Dept. of Natural Resources & Environmental Control Underground Storage Tank Branch 715 Grantham Lane New Castle, DE 19720 302-323-4588</p>		

1 = State has 1 person serving as both the UST and LUST Contact.

2 = State has 1 UST and 1 LUST Contact, both have the same address and telephone number.

State UST/LUST Program Offices

<p>MS UST/LUST CONTACT¹ MS Department of Environmental Quality Bureau of Pollution Control Underground Storage Tank Section P.O. Box 10385 Jackson, MS 39289-0385 601-961-5171</p>	<p>NY UST/LUST CONTACT¹ NY Dept. of Environmental Conservation Bulk Storage Section 50 Wolf Road, Room 326 Albany, NY 12233-3520 518-457-4351</p>	<p>TX UST/LUST CONTACT¹ Texas Water Commission Petroleum Storage Tank Division P.O. Box 13087, Capitol Station 1700 North Congress Austin, TX 78711-3087 512-371-6200</p>
<p>MT UST/LUST CONTACT¹ MT Dept. of Health & Environ. Science Solid & Hazardous Waste Bureau Cogswell Building - UST Program Helena, MT 59620 406-444-5970</p>	<p>OH UST/LUST CONTACT² OH Department of Commerce 8895 East Main Street P.O. Box 687 Reynoldsburg, OH 43068 614-752-7938</p>	<p>UT UST/LUST CONTACT¹ UT Dept. of Environmental Quality Bureau of Solid & Hazardous Waste Division of Environmental Response and Remediation 1950 West North Temple Salt Lake City, UT 84116 801-538-4100</p>
<p>NC UST/LUST CONTACT² NC Pollution Control Branch Division of Environmental Management Dept of Env. Health & Natural Resources 441 N. Harrington St Raleigh, NC 27603 919-733-8486</p>	<p>OK UST/LUST CONTACT OK Corporation Commission Underground Storage Tank Program Jim Thorpe Building 2101 North Lincoln Blvd. Oklahoma City, OK 73105 UST: 405-521-3107 LUST: 405-521-6575</p>	<p>VA UST/LUST CONTACT VA State Water Control Board P.O. Box 11143 Richmond, VA 23230-1143 UST 804-527-5192 LUST 804-527-5188</p>
<p>ND UST/LUST CONTACT¹ ND Department of Health Division of Waste Management Box 5520, 1200 Missouri Ave., Room 302 Bismarck, ND 58502-5520 701-221-5166</p>	<p>OR UST CONTACT OR Dept. of Environmental Quality Underground Storage Tanks 811 SW Sixth Avenue, 7th Floor Portland, OR 97204 503-229-5733</p>	<p>VT UST/LUST CONTACT¹ VT Dept. of Natural Resources Underground Storage Tank Program 103 South Main Street, West Building Waterbury, VT 05676-0404 802-244-8702</p>
<p>NE UST CONTACT NE State Fire Marshal's Office Flammable Liquid Storage Tank Division 246 South 14th Street Lincoln, NE 68508 402-471-9465</p>	<p>LUST CONTACT OR Dept. of Environmental Quality UST Cleanup Program 811 SW Sixth Avenue, 9th Floor Portland, OR 97204 503-229-6170</p>	<p>WA UST CONTACT WA Department of Ecology P.O. Box 47655 Olympia, WA 98504-7655 206-459-6272</p>
<p>LUST CONTACT NE Dept. of Environmental Control Groundwater Sect., Water Quality Division 301 Centennial Mall South, Box 98922 Lincoln, NE 68509-8922 402-471-4230</p>	<p>PA UST/LUST CONTACT² PA Dept. of Environmental Resources BWQM, Storage Tank Program 3600 Vartan Way, 2nd Floor P.O. Box 8762 Harrisburg, PA 17105-8762 717-657-4080</p>	<p>LUST CONTACT WA Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 206-438-7164</p>
<p>NH UST LUST CONTACT¹ NH Dept. of Environmental Services Oil Compliance Section Groundwater Protection Bureau 6 Hazen Drive, P.O. Box 95 Concord, NH 03301 603-271-3644</p>	<p>RI UST/LUST CONTACT¹ RI Dept. of Environmental Management Underground Storage Tank Section 291 Promenade St. Providence, RI 02908 401-277-2234</p>	<p>WI UST CONTACT WI Dept. of Industry, Labor & Human Relations Bureau of Petroleum Insp. & Fire Protection P.O. Box 7969 201 East Washington Avenue Madison, WI 53702 608-266-7605</p>
<p>NJ UST LUST CONTACT² NJ Dept. of Environmental Protection and Energy Responsible Party Site Remediation 401 East State Street (CN 029) Trenton, NJ 08625 609-984-3156</p>	<p>SC UST/LUST CONTACT SC Dept. of Health and Environ. Control Ground-Water Protection Division 2600 Bull Street Columbia, SC 29201 UST: 803-734-5335 LUST: 803-734-5331</p>	<p>LUST CONTACT WI Department of Natural Resources P.O. Box 7921 Madison, WI 53707-7921 608-267-7560</p>
<p>NM UST LUST CONTACT¹ NM Environment Department Underground Storage Tank Bureau P.O. Box 26110 1190 St. Francis Drive Harold Runnels Building, Room N2150 Santa Fe, NM 87502 505-827-0188</p>	<p>SD UST/LUST CONTACT¹ SD Dept. of Environ. & Natural Resources Division of Environmental Regulation 523 East Capitol Joe Foss Building Pierre, SD 57501-3181 605-773-3351</p>	<p>WV UST/LUST CONTACT² WV Division of Natural Resources Waste Management Section UST/LUST Office 1356 Hansford Street Charleston, WV 25301 304-348-6371</p>
<p>NV UST LUST CONTACT¹ NV Dept. of Conservation & Natural Res Division of Environmental Protection Capitol Complex 123 W. Nye Lane Carson City, NV 89710 702-687-5872</p>	<p>TN UST/LUST CONTACT¹ TN Dept. of Environment & Conservation 200 Doctors Building 706 Church Street Nashville, TN 37243-1541 615-741-4081</p>	<p>WY UST/LUST CONTACT¹ WY Dept. of Environmental Quality Water Quality Division Herschler Building, 4th Floor West 122 West 25th Street Cheyenne, WY 82002 307-777-7781</p>

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State UST/LUST Program Offices

US TERRITORIES

<p>AS UST/LUST CONTACT¹ AS Environmental Protection Agency Office of the Governor American Samoa Government ATTN: UST/LUST Program Pago Pago, American Samoa 96799 684-633-2304</p> <p>CNMI UST/LUST CONTACT¹ Division of Environmental Quality P.O. Box 1304, Dr. Torres Hospital Commonwealth of Northern Mariana Ids Saipan, MP 96950 607-234-6984</p>	<p>GU UST/LUST CONTACT¹ GU Environmental Protection Agency IT&E Harmon Plaza, Complex Unit D-107 130 Rojas Street Harmon, Guam 96911 671-646-8863</p> <p>PR UST/LUST CONTACT¹ Water Quality Control Environmental Quality Board P.O. Box 11488 Commonwealth of Puerto Rico Santurce, Puerto Rico 00910 809-767-8109</p>	<p>VI UST/LUST CONTACT¹ Environmental Protection Division Dept. of Planning and Natural Resources Suite 321, Nisky Center 45A Estate Nisky Charlotte Amalie St. Thomas, Virgin Islands 00802 809-774-3320</p>
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APPENDIX B

UST Management Checklist

___ Are existing USTs and those taken out of service after January 1, 1974, registered with your implementing agency?

___ Were USTs installed after May 8, 1986, and new tanks registered within 30 days of each tanks initial use?

___ Does the facility use a state UST notification form?

___ Are new USTs installed according to manufacturer's recommendations?

___ Are new USTs (and existing USTs by December 22, 1998) protected from corrosion as explained in Figure 2-17

___ Are new USTs (and existing USTs by December 22, 1998) equipped with spill and overfill protection as explained in Figure 2-17

___ Are USTs made of or lined with materials compatible with the substance stored in the UST?

___ For any repaired UST, is there a written record available that proves there was a tightness test performed?

___ Are new and existing USTs equipped to detect leaks as explained in Figure 2-17

Does the facility maintain the following records: *

◆ ___ Results of all UST testing, sampling, monitoring, inspection, maintenance, and repair work (for the past year)?

◆ ___ Registration records for all in-service, temporarily out of service, and permanently closed tanks?

◆ ___ Records of all spills, leaks, and associated site assessment and cleanup activities (for past 3 years)? [Note: once archived, these records are to be kept indefinitely in accordance with COMDTINST 5212, Paperwork Management Manual.]

◆ ___ Records for UST disposal, closure, and removal activity and results of excavation area assessment (for past 3 years)?

◆ ___ Official correspondence with the state implementing agency?

___ Do the USTs meet the requirements for petroleum tank systems?

___ Are new USTs double walled?

___ Are new USTs equipped with interstitial monitoring?

___ For any petroleum UST, does the facility report to the proper state agency within 24 hours for any spill or overfill of 25 gallons or more, or any aboveground release that causes a sheen on nearby surface water?

___ For any petroleum UST, does the facility immediately report to the NRC for any aboveground release that causes a sheen on nearby surface water?

___ For such a spill or overflow, was the leak or spill stopped and visibly contaminated soil removed?

___ For such a spill or overflow, was the cleanup action reported to the proper state agency within 20 days of the incident?

___ If requested by the state agency, does the facility submit a long-term cleanup plan for removing the spilled substance?

Do temporarily closed USTs (closed for 3 months or less) have the following:

◆ ___ Corrosion protection system still in place?

◆ ___ Leak detection device in place?

◆ ___ Capped lines attached to the tank except vent lines?

◆ ___ Record of test results of the site assessment to ensure that no leak has occurred?

___ Have all USTs that have been taken out of service for longer than 12 months been permanently closed?

___ Is closure conducted according to industry-recommended practices (i.e., is an out-of-service tank emptied and either removed from the ground or filled with a chemically inert solid, such as sand)?

___ Is a site assessment conducted to ensure that no leak has occurred?

___ Are USTs disposed in accordance with federal, state, and local regulations?

___ Does the facility have a spill prevention, control, and countermeasure (SPCC) plan in place?

___ Does the facility meet the substantial criteria for a facility response plan?

___ Does the facility have an onsite emergency response coordinator?

___ Is the facility in contact with the local police and fire departments, local hospitals, and state emergency response teams?

___ Does the facility have a training program that covers UST best management practices, spill prevention and control, and emergency action?

APPENDIX C

AST Management Checklist

- Does your state or local authority require notification and registration of ASTs?
- Are ASTs made of or lined with materials compatible with the substance stored in the AST?
- Are ASTs subject to periodic integrity testing such as hydrostatic testing, visual inspection or non-destructive shell thickness testing?
- Are the outsides of ASTs frequently observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas?
- Are all ASTs double walled or provided with secondary containment?
- Are diked containment areas sufficiently impervious to contain spilled oil?
- Are the drainage valves closed when not in use at diked areas?
- Are the outsides of ASTs frequently observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas?
- Do facility personnel understand the meaning of a harmful discharge as described in 40 CFR 110.67?
- For any petroleum AST, does the facility immediately report to the NRC for any aboveground release that causes a sheen on nearby surface water?
- Does the facility have a spill prevention, control, and countermeasure (SPCC) plan in place?
- Does the facility meet the substantial criteria for a facility response plan?
- Does the facility have an onsite emergency response coordinator?
- Is the facility in contact with the local police and fire departments, local hospitals, and state emergency response teams?
- Does the facility have a training program that covers AST best management practices, spill prevention and control, and emergency action?