

## GSA ORDER

SUBJECT: Fuel Storage Tank Management

1. Purpose. To establish GSA's policy for managing fuel storage tanks.
2. Cancellation. This Order does not cancel or replace any existing Order or policy.
3. Authority. Title 40: Protection of Environment: Part 112—Oil Pollution Prevention; Part 280—Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (USTs) [dated July 2015]; Part 355—Emergency Planning and Notification; Part 370—Hazardous Chemical Reporting: Community Right-To-Know; Energy Policy Act of 2005; Title 41: Public Contracts and Property Management; Subtitle C, Chapter 102— Federal Management Regulations; the International Fire Code (IFC) and National Fire Protection Association (NFPA) codes and standards.
4. Background.
  - a. Federal, State, interstate, and local laws establish standards for the management of storage tanks used or previously used to store regulated substances of which petroleum is the substance of greatest concern. Collectively, these tanks are hereafter referred to as fuel storage tanks (FSTs). Owners and operators must install, operate, and maintain FSTs in a manner that reduces the potential for release of their contents into the environment. Laws further mandate specific training, emergency planning, release reporting, and closure procedures.
  - b. The Clean Water Act at 33 U.S.C. 1323, and Resource Conservation and Recovery Act (RCRA) at 42 U.S.C. 6991f, both waive Federal sovereign immunity to the requirements of these laws, as well as their implementing regulations – Federal, State, interstate, and local. The Clean Water Act (CWA) waiver does not establish a provision that mandates the payment of penalties. The RCRA waiver does however include potential payment of penalties. With the exception of underground storage tank (UST) systems located on Indian Lands, States have the primary authority to implement the UST program within their boundaries. Authorized State Programs' governing standards must be no less stringent than Federal laws.

c. The greatest risk associated with hazardous materials storage is the potential for releases that can contaminate groundwater and soil. Releases can also pose other risks to the environment, human health and safety, as well as the potential for fire, explosions, property damage, and major financial obligations.

d. GSA owns or operates hundreds of FSTs within Federal facilities and therefore assumes the associated risks. The primary regulated substance stored in GSA FSTs is heating oil, which poses the same risks of release posed by other fuels stored in tank systems. To minimize these risks and reduce GSA's potential liability, all GSA FSTs shall be managed in accordance with this Order.

5. Scope and applicability. This Order and attachments apply to all FSTs owned by or installed (including those installed on a reimbursable basis) at Federal facilities under GSA's jurisdiction, custody, or control, including all buildings delegated to other Federal agencies by the Administrator of General Services, and leased space where GSA retains ownership and/or operational responsibility. This Order is not applicable to FSTs associated with property transferred for disposal through the PBS Office of Real Property Utilization and Disposal.

6. Effective date. These documents are effective from the date of signature and remain in effect until cancelled.

7. Responsibilities. The Offices of Facilities Management, Design and Construction, and Real Property Asset Management business lines, Regional Commissioners, Facility Management and Service Center Directors, Facility Managers and Lease Administration Managers shall ensure this Order is implemented in conformance with the companion desk guide and all of its elements are incorporated into planning activities, management decisions, and policy development.

8. Policy. GSA owned, installed, or operated FSTs shall comply with all applicable Governing Standards, the PBS Facilities Standards for the Public Buildings Service (PBS-P100), and the procedures set forth herein. Where laws and regulations differ from the GSA policy, the more stringent requirement shall be applied.

9. General requirements. GSA or its designees shall:

a. Include FST considerations as part of the due diligence process when acquiring property.

b. Incorporate language in all Occupancy Agreements (OA) that requires tenants and delegates to comply with all applicable Federal, State, interstate, and local FST regulatory requirements. In accordance with the Federal Management Regulations (FMR), hold customer agencies financially responsible for expenses incurred by the GSA as a result of any failure on the part of the customer agency to fulfill a commitment outlined in an OA or other written agreements in advance of, or in addition to, the OA.

c. Ensure that FSTs at GSA owned facilities comply with all applicable Governing Standards (i.e. laws, and their associated Federal, State, interstate, and local implementing regulations, IFC and NFPA codes and standards, and GSA design, installation, and operational criteria).

d. Make proper notifications to the appropriate regulatory implementing agency for planned FST activities as required by law.

e. Install and operate aboveground storage tanks (ASTs) in accordance with all applicable codes and regulations including 40 CFR 112 Oil Pollution Prevention. Equip ASTs with a method of leak detection and appropriate secondary containment. Conduct and document periodic inspections (i.e. monthly, annual, third party, etc.).

f. Ensure that newly installed USTs meet the Federal regulatory requirements published in 40 CFR Part 280 Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (USTs) as amended and this Order.

g. Equip all existing USTs with: (1) a method of continuous leak detection (e.g. automated tank gauge) that can detect a release from any portion of the tank and the connected underground piping that routinely contains product and (2) spill prevention systems that will prevent releases of product to the environment due to corrosion, spills, or overfills.

h. Calibrate, operate, inspect, test, repair, maintain, and close tank systems in accordance with applicable current regulatory requirements, manufacturer's instructions, or codes of practice developed by a nationally recognized association or independent laboratory. Where GSA Preventive Maintenance (PM) Guides are the standard, they shall be no less protective than the three standards listed here.

i. Upgrade or implement closure procedures for any UST system that does not meet the standards of 40 CFR Part 280 Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (USTs) and this Order.

j. Perform FST repairs, removal, abandonment, or closure by qualified licensed contractors.

k. Develop and maintain a current inventory and management program that encompasses all FSTs. The inventory shall be housed the National Computerized Maintenance Management System (NCMMS) for all GSA owned and operated facilities. For GSA owned and operated facilities where the NCMMS is not fully deployed, the

region shall maintain a the current inventory as required in the O&M specification until such time as the information is migrated to the NCMMS.

l. Ensure each owned facility has personnel designated and trained for each class of UST operator, and are familiar with both UST and AST operations and response procedures as required by Federal, State, interstate, and local regulation, and the national Operations and Maintenance (O&M) specification. Training for contract personnel shall be the responsibility of the contractor.

m. Develop, document, and maintain appropriate level of site-specific spill prevention and control procedures in accordance with Federal, State, interstate, and local regulation and as required in the national O&M specification, whichever is more stringent.

n. Complete Emergency Planning and Community Right-to-Know Act (EPCRA) notifications and reporting requirements in accordance with 42 USC 11001 and Executive Order 13650.

o. Clean up spills and report releases to appropriate authorities as required by Federal and local regulatory implementing agencies.

p. Coordinate internal release reporting and other emergency events within GSA through the Office of Mission Assurance (OMA) incident reporting system, regional safety and environmental staff, and other locally designated offices. Notify the Central Office Facility Risk Management Division within two (2) hours of discovery of all releases that exceed the reportable quantity established by the governing regulatory implementing agency.

q. Select fuel supply source based on environmental, safety, and engineering feasibility in the following order of preference: (1) alternate energy, (2) natural gas, (3) double walled AST; concrete vaulted AST or subterranean AST; and (4) UST (double-walled fiberglass reinforced plastic). Selection shall be made in consultation with the Regional environmental program office.

r. Make reasonable accommodations to Federal, State, interstate, or local regulatory implementing agencies requests to access GSA owned and operated structures for the purpose of conducting compliance inspections.

s. Identify FST projects in the asset planning process.

t. Maintain all records and reports, including maintenance and monitoring records, work orders, and inspection reports, in accordance with regulatory and GSA requirements. To provide greater protection against future potential environmental liabilities, FST records shall be maintained for the life of the facility.

10. Point of contact. Director, Facility Risk Management Division, Office of Facilities Management.
11. Attachments: Appendix A – “Acronyms and Definitions”  
Appendix B – “Desk Guide for Fuel Storage Tank Management”
12. Signature.

/S/ \_\_\_\_\_  
NORMAN DONG  
Commissioner  
Public Buildings Service

## Appendix A: Acronyms and Definitions

1. Ancillary Equipment. Any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from a FST.
2. Aboveground Storage Tank (AST). Any tank or other container that is above ground, partially buried, bunkered, or in a subterranean vault and used to store oil. When calculating Spill Prevention, Control, and Countermeasures (SPCC) determinations, include all containers with a capacity of 55 gallons or greater.
3. Automatic Tank Gauging (ATG). Equipment that tests for loss of product and inventory control. ATGs must be able to detect a leak no larger than 0.2 gallons per hour with certain probabilities of detection and of false alarm. Overfill alarms are often used as part of automatic tank gauging systems. Alarms shall be connected to an electrical circuit that is active at all times.
4. Code of Federal Regulation (CFR). The codification of rules and regulations published in the Federal Register.
5. Fuel Storage Tanks (FST). Any container defined herein as an aboveground or underground storage tank used to store hazardous materials, certain hazardous substances, oil, heating oil, or other petroleum products. Tanks and cylinders used to store propane are excluded from this definition.
6. Governing Standards. Any FST policy, procedure, law, regulation or related requirements documents issued by a Federal, State, interstate or local regulatory implementing agency, or codes of practice developed by a nationally recognized association or organization (e.g. NFPA, IFC).
7. Hazardous Materials. Federal governing regulatory agencies define this term differently. For the purpose of this Order, it shall be defined as any item that is required to have a Safety Data Sheet or is regulated by the Department of Transportation (e.g., oil, fuel, hazardous waste, etc.).
8. Hazardous Substance. Classified as listed and unlisted; (1) listed hazardous substances are elements and compounds, and hazardous wastes appearing in the table in 40 CFR Part 302.4; and (2) unlisted hazardous substances are solid waste, as defined in 40 CFR 261.2, which is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b) if it exhibits any of the following characteristics: toxicity, ignitability, reactivity, and corrosivity.

9. Heating Oil. Petroleum that is No. 1, No. 2, No. 4-light, No.4-heavy, No.5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils; and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers or furnaces. When used for dual purposes, storage of these oils is not exempt from the UST laws.

10. Oil. Oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, non-petroleum oils, synthetic oils, animal fats, oils and greases, and vegetable oils, and oil mixed with wastes other than dredged spoil and oily mixtures. In this Order, the word 'oil' and 'fuel' are interchangeable.

11. Owner and Operator. As used herein, the term "owner" refers to the Federal agency that funded the installation and/or operation of a particular FST. The term "operator" refers generically to any Federal Agency employee(s) or contractor assigned the responsibility for the management and operations of a federally owned fuel storage tank. Ownership and operatorship should be established in the terms of the applicable occupancy or use agreement.

12. Petroleum. See Oil and Heating Oil.

13. Regulatory Implementing Agency. The Governmental Agency (governing authority) that has authority to implement the FST programs. These agencies may include the Occupational Safety and Health Administration (OSHA), Environment Protection Agency (EPA), a State with a program authorized by a memorandum of agreement with EPA, or the designated State or local agency responsible for carrying out an approved tank program.

14. Spill. Any release of a hazardous substance or hazardous material into the environment. The term is used interchangeably with "release" and includes but is not limited to suspected releases, overfills and spills, and confirmed releases. Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an FST into groundwater, surface water or subsurface soils.

15. Suspected Releases. Includes any of the following conditions involving regulated substances at a FST site or in the surrounding area where:

- a. There is a presence of free product or vapor in soils, basements, sewer and utility lines, or nearby surface water.
- b. Unusual operating conditions are observed (such as the erratic behavior of product dispensing from equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), ***unless***: (1) The system equipment or component is found not to be releasing regulated substances to the environment; (2) Any defective system equipment or component is immediately repaired or replaced; and (3) For secondarily

contained systems, except as provided in 40 CFR 280.43(g)(2)(iv), any liquid found in the interstitial space not used as part of the interstitial monitoring method is immediately removed; and,

- c. Monitoring results, including investigation of an alarm from a release detection method, indicate a release may have occurred ***unless***: (1) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; (2) The leak is contained in the secondary containment; (3) In the case of inventory control, a second month of data does not confirm the initial result or the investigation determines no release has occurred; or (4) The alarm was investigated and determined to be a non-release event.

16. Tank System. Collectively any FST (aboveground or underground), the connected piping (underground or aboveground), underground ancillary equipment, and containment system, if any.

17. Third Party Inspector. Certified by the governing implementing agency to conduct on-site FSTs inspections for compliance with Subtitle I 40 CFR 280 requirements or in the case of a State program under Section 9004 of Subtitle I. For ASTs, Third-Party inspections are routinely conducted by a local Fire Marshal or other entities sanctioned by the jurisdiction. Inspections conducted by the O&M Contractor do not satisfy the Third-Party requirement.

18. Underground Storage Tank (UST). USTs include, but are not limited to tanks that store fuel used to operate emergency generators. The Environmental Protection Agency's UST exemptions in 40 CFR 280.10 and 280.12 list USTs that are otherwise excluded from the regulatory control of the UST standards. For the purpose of this Order, one of these exemptions - tanks used for storing heating oil for consumptive use on the premises where stored - will be managed, purely internally, as though such exemption did not exist.



APPENDIX B



**Public Buildings Service**

**Desk Guide**  
**For**  
**Fuel Storage Tank Management**

Companion to  
GSA Order PBS 1095.2

**Office of Facilities Management**  
**Facility Risk Management Division**

**September 12, 2016**

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## 1. INTRODUCTION

This Desk Guide provides supplemental information on the requirements included in GSA's Fuel Storage Tank (FST) Policy (PBS Order 1095.2) and shall be used in conjunction with the Policy.

GSA is required to comply with Federal, State, interstate, and local jurisdictions' regulations. GSA's Policy is to comply with all FST regulatory requirements including those governing installation, operations and maintenance (O&M), and removal and closure. Where the laws and/or regulations differ from GSA Policy, the more stringent requirement shall be applied. This document does not contain a listing of all Federal, State, and local regulatory requirements required for compliance; rather it states GSA specific FST requirements that may be more stringent than some regulations.

## 2. APPLICABILITY

The PBS Order 1095.2 and this Desk Guide are applicable to aboveground storage tanks (ASTs) and underground storage tanks (USTs), collectively known as FSTs, as follows:

- GSA owned and operated FSTs;
- FSTs at delegated facilities regardless of tank ownership and FST O&M responsibilities;
- FSTs installed on GSA owned property, regardless of FST O&M responsibilities (*e.g.*, tenant managed);
- Regulated FSTs as well as tanks used to store heating oil; and
- FSTs at leased facilities must meet all applicable Federal, State, and local requirements for installation.

**NOTE:** Although most tanks used to store heating oil are exempt from Federal and some State regulations, the risks posed by storing heating oil are the same as for regulated tank systems. To minimize these risks and reduce GSA's potential liability, FSTs used to store heating oil shall be installed and managed in accordance with this Policy.

## 3. IMPLEMENTATION AND FUNDING

The effective date of implementation of this Policy and Desk Guide is dependent on when the FST was installed or brought into operation. Timeline for Policy implementation, including funding required for Policy compliance is as follows:

- **New FSTs:** The Policy is effective immediately for any tank installed or brought into operation on or after the date the Policy was signed. Budget plans and requests for new FSTs shall include appropriate funding to ensure compliance with all elements of this Policy.
- **Existing FSTs:** The effective date for tanks installed or brought into operation before the date the Policy was signed will be determined individually by applying the following criteria: (1) Potential for harm (considerations include if tank has properly functioning monitoring/spill prevention equipment, age, condition, performance records, etc.), (2) Ownership/operator responsibility (3) Future plans for the building (considerations include excessing, major renovations where tank removal/upgrade is or can be included, etc.). Funding for FST replacement or upgrades shall be prioritized based on the criteria described above. Budget plans and requests for identified FST replacements or upgrades are to be submitted no later than two budget cycles after the effective date of this Policy.

## 4. ROLES AND RESPONSIBILITIES

Table 1 highlights some of the functions necessary to ensure compliance with Federal FST requirements. As State and local regulations can be more stringent than the Federal requirements, it is the responsibility of regional staff to determine all requirements applicable to their facility. While many of the operational functions are performed by O&M Contractors; it is GSA's responsibility to ensure that operations are compliant. The listed role for the respective responsibilities is meant to serve as guidance only and is not intended to mandate how responsibilities should be delegated within the regions.

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**Table 1: Recommended FST Roles & Responsibilities**

Role	Responsibilities
<b>Central Office OFM</b>	<ul style="list-style-type: none"> <li>• Develop and issue FST management policy and procedure</li> <li>• Provide access to current federal regulatory requirements, including any updates</li> </ul>
<b>Regional EHS Managers</b>	<ul style="list-style-type: none"> <li>• Assist Building Operations personnel to develop a tank management plan for all tanks in which they are responsible</li> <li>• Provide technical support to Building Operations and the Facility Management Community in determining compliance status, and notification and reporting requirements</li> <li>• Determine and communicate applicable State and local requirements to regional staff</li> <li>• Maintain knowledge of region-wide activities within the tank programs</li> <li>• Maintain regional FST inventory</li> </ul>
<b>Building Operations/Facility Management Community &amp; Tenant Agencies/Operators</b>	<ul style="list-style-type: none"> <li>• Comply with the GSA FST Policy</li> <li>• Develop and maintain FST inventory</li> <li>• Develop a tank management plan for all tanks for which they are responsible</li> <li>• Make proper notifications to applicable regulatory agencies (e.g., installation, closure, release, and Emergency Planning and Community Right-to-Know Act [EPCRA] reporting)</li> <li>• Designate and train personnel (both operators and response)</li> <li>• Develop and maintain Spill Prevention, Control, and Countermeasure (SPCC) Plans</li> <li>• Ensure that contracts and work performed by contractors complies with GSA's FST Policy and regulatory requirements</li> <li>• Coordinate internal release reporting with Regional Office of Mission Assurance (OMA)</li> <li>• Request funds for corrective actions</li> </ul>
<b>Regional Office of Mission Assurance (OMA)</b>	<ul style="list-style-type: none"> <li>• Develop and maintain internal reporting procedures for emergency notifications</li> <li>• Coordinate internal release reporting with Building Operators, Facility Management Community, and/or Tenant Agencies/Operators</li> <li>• Record and disseminate reported incident data</li> </ul>
<b>Regional Leadership</b>	<ul style="list-style-type: none"> <li>• Ensure GSA's FST policy is implemented appropriately</li> <li>• Promote FST compliance through planning, budgeting, management decisions, and policy development</li> </ul>

## 5. CONTRACTING FOR FST SERVICES

Contractors often provide FST services to GSA including installation, O&M, removal, and closure. Therefore, contract scopes of work must reflect the requirements included in GSA's FST Policy. Contractors are to be informed of GSA's FST Policy, as well as expectations to comply with all Federal, State, and local regulations. Although contracts for FST services specify that contract staff must have proper qualifications and certifications to perform work in compliance with all regulatory requirements, GSA's liability does not necessarily transfer to the contractor. Even if a contractor is performing the work, GSA is liable for work performed on GSA property. Therefore, GSA Facility Managers are required to provide proper oversight of contractors to ensure compliance with the GSA FST Policy.

## 6. FST ON GSA LEASED PROPERTIES

GSA's Policy requires that lessors comply with all applicable Federal, State, and local jurisdictions' FST regulatory requirements. GSA shall conduct document reviews of lease language to ensure compliance with

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these regulatory requirements. Lease language may not be specific to FSTs, but it must clearly state that operations will be conducted in compliance with all appropriate environmental regulations.

## 7. NOTIFICATIONS FOR PLANNED FST ACTIVITIES

Notifications must be made to the appropriate authorities when making changes such as tank installation, closure, and removal of FSTs. Users shall consult state, and local agencies for specific requirements as they may vary by jurisdiction. Notification shall be made only when required by a regulatory implementing agency. The following minimum notifications must be made to the respective governing regulatory authorities:

### A. ASTs

- Notifications shall be made as specified by the State and local governing agency.

### B. USTs

- Within 30 days of bringing a tank into use ([40 CFR 280.22](#));
- When there is a change in the product stored in the UST ([40 CFR 280.71](#)); and
- At least 30 days before beginning either permanent closure or change-in-service for USTs ([40 CFR 280.71](#)).

## 8. FST INSTALLATION AND OPERATIONS & MAINTENANCE REQUIREMENTS

If there is need for a new FST, GSA's Policy requires that to the extent practicable, preference be given to replacements in the following order: (1) an alternate energy source, (2) natural gas, (3) AST, and (4) fiberglass re-enforced plastic/other approved non-corrosive double walled UST. Consult regional safety and environmental staff and engineering subject matter experts for suitable site-specific options.

FST installation shall be in accordance with applicable laws, codes, and manufacturer's instructions and performed by qualified contractors. All components of the FST system must be constructed of, or lined with, materials compatible with the substance to be stored in the tank. Once installed, FSTs shall be operated and maintained to reduce or prevent potential releases to the environment.

### A. ASTs

#### i. Installation

AST design, installation and operation shall be conducted in accordance with all applicable industry standards and local codes, including applicable rules set forth in National Fire Protection Association (NFPA) 30, 30A, 31, International Fire Code (IFC) and others; see Appendix B of this Desk Guide for a comprehensive listing of applicable standards and codes. NFPA rules cover installation and operation standards for storage tanks, oil handling systems, and oil burning equipment. Installed ASTs must be certified to meet Underwriters Laboratory (UL) Standard 2085 and include a manufacturer's warranty for a minimum of 20 years. State and local regulatory agencies may have specific installation requirements; consult with these agencies to determine additional requirements, if any.

GSA requires that ASTs have secondary containment. Open containment systems must be capable of containing the contents of the largest tank - plus an additional volume calculated based on potential rainfall events. Open containment areas must not be used for storage of equipment (*i.e.*, spill response equipment, ladders, buckets, etc.) that will reduce the capacity of the secondary containment area.

Use of double-walled tanks eliminates the need to maintain secondary containment areas, monitor and release rainwater, maintain and test valves, and keep discharge logs.

#### ii. Operations and Maintenance

ASTs are required by GSA to include spill and overfill protection, release detection, secondary containment and corrosion protection as needed. Procedures must also be in place for testing and inspecting ASTs and conducting tank repairs. Consult the state agency for specific AST O&M requirements.

- a. Spill and Overfill Protection. Follow tank management standards (*e.g.*, American Petroleum Institute) and include a secondary containment area to detect spills and leaks.

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- b. Secondary Containment. At a minimum, one of the following prevention systems or its equivalent shall be used as a means of secondary containment:
- Open secondary containment walls;
  - Closed secondary containment (for double-walled tanks);
  - Dikes, berms, or retaining walls sufficiently impervious to contain oil;
  - Curbing or drip pans;
  - Sumps and collection systems (only with Professional Engineer approval);
  - Culverting, gutters, or other drainage system (only with Professional Engineer approval); and
  - Spill diversion ponds or retention ponds (only allowed with Professional Engineer approval).

- c. Testing and Inspections. Test and inspect ASTs on a routine basis and when repairs are made. The frequency is commonly defined by the state and local governing authority. In the absence of an established frequency, it is GSA's policy that tanks shall be tested or inspected by a third-party at least every three (3) years. Industry standards must be used to determine the qualifications of persons performing the test and type of test or inspection.

**Note!** GSA Policy requires visual inspections of FSTs to be conducted on a monthly basis. Inspections must be documented and maintained according to the recordkeeping requirements of the O&M specification and this Policy.

In-house visual inspections are required to be conducted and documented on a monthly basis. These inspections should be conducted and documented in conjunction with the monthly O&M Quality Control inspection requirement. The inspection should look for signs of leaks, stress fractures, stressed vegetation, and visible water in the secondary containment area.

- d. Tank Repairs. All tank repairs must be performed by qualified contractors who are certified to make repairs to the specific equipment they are repairing, in accordance with the tank warranty. Consult the state agency for specific tank repair reporting requirements.

## B. USTs

### i. Installation

UST systems must be installed in accordance with Federal, State, and local requirements, industry codes and standards, and manufacturer's instructions. This includes spill and overfill control ([40 CFR 280.30](#)), corrosion protection ([40 CFR 280.31](#)), release detection ([40 CFR 280.43](#)), and secondary containment ([40 CFR 280.42](#)). All installations must be performed by licensed and certified installers ([40 CFR 280.20](#)). USTs installed must be UL Certified and carry a minimum manufacturer's warranty of 20 years. UST installation and operation must also comply with applicable NFPA and IFC codes and industry standards.

The preferred type of UST is a double-walled fiberglass reinforced plastic (FRP) tank. All accessory equipment must be designed and installed to be compatible with the UST and the substance to be stored in the tank. The UST must have interstitial monitoring and be equipped with an automatic tank gauge (ATG) system. USTs must be equipped with spill catchment basins and equipment sumps capable of containing spills.

In accordance with GSA Policy, each newly installed UST system must be minimally equipped with an ATG and an automatic line leak detector on pressurized systems to continuously monitor for releases.

**NOTE:** Unless specifically designed to do so, ATGs do not monitor leaks on piping systems. Tanks with inoperable/malfunctioning ATGs and/or interstitial monitoring systems that do not provide for continuous 30 day reports do not satisfy this requirement.

### ii. Operations and Maintenance

USTs shall be operated and maintained to reduce and prevent releases. USTs are made of a complex collection of mechanical and electronic equipment that can fail under certain conditions. These failures can be prevented or quickly detected by following required O&M procedures, including those outlined in the manufacturer's instructions, GSA's Preventive Maintenance (PM) Manual, PBS Order PBS 1095.2 and this Desk Guide. To minimize potential environmental liability, it is imperative that UST systems are properly operated and continuously maintained to ensure that leaks are avoided or quickly detected.

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- a. Spill and Overfill Protection ([40 CFR 280.30](#)). Measures to prevent spills and overfill include monitoring filling operations and ensuring that fuel delivery personnel measure the amount of fuel in a tank before filling so that available open capacity is known. In addition, overfill prevention equipment is required, including an overfill alarm, an overfill prevention device (such as a fill limiter), and a spill bucket.
- b. Corrosion Protection ([40 CFR 280.31](#)). USTs may be constructed of FRP, which does not require corrosion protection measures as FRP does not corrode. Steel UST systems (tanks and piping) must be designed to prevent leaks and releases during the tank's lifetime. To ensure corrosion protection is effective:
- Use a recognized tank industry standard for inspection;
  - Test cathodic systems within six (6) months of installation and every three (3) years by a qualified inspector;
  - Inspect an impressed current cathodic protection system every 60 days; and
  - Maintain records to demonstrate compliance.
- c. Release Detection ([40 CFR 280.43](#)). See Table 2 for acceptable UST system release detection methods.
- *Tanks*. In accordance with GSA Policy, each UST system must include an ATG to monitor for releases. Other methods can be used in conjunction with an ATG as long as the method can detect a release from any portion of the tank and the connected underground piping. The methodology used must detect releases from any portion of the UST system that contains product, and must be installed, calibrated, operated, and maintained as specified in the manufacturer's instructions.
  - *Piping*. Methods of release detection must be monitored in accordance with automatic line leak detectors (for pressurized piping systems), line tightness testing, and applicable tank methods. If the system is designed so that product drains back into the tank once suction is released, no release detection equipment is required ([40 CFR 280.41\(b\)\(2\)](#)). If this cannot be demonstrated, then this requirement is not met. All UST system owners/operators must maintain records demonstrating compliance with the applicable requirement ([40 CFR 280.34](#)).

**Table 2: UST System Release Detection Methods**

Component	Type of Release Detection Monitoring	Release Detection Description	New Tanks	Existing Tanks
USTs ( <a href="#">40 CFR 280.41(a)</a> )	Inventory Control, Manual Tank Gauging, and Tank Tightness Testing	Since GSA Policy requires USTs to be equipped with ATGs, these methods should only be used for backup monitoring (e.g., to verify ATGs are working properly and during fueling operations).		X
	Automatic Tank Gauging	New and existing USTs are required to be equipped with ATGs. Equipment for automatic tank gauging must meet the following requirements ( <a href="#">40 CFR 280.43(d)</a> ): (1) Test must detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; <b>AND</b> (2) Inventory control must detect a release of at least 1.0 percent of flow through plus 130 gallons on a monthly basis.	X	X
	Vapor Monitoring	This method should only be used when testing or monitoring for suspected releases ( <a href="#">40 CFR 280.43(e)</a> ).	X	X
	Groundwater Monitoring	This method should only be used when testing or monitoring for suspected releases ( <a href="#">40 CFR 280.43(f)</a> ).	X	X

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Component	Type of Release Detection Monitoring	Release Detection Description	New Tanks	Existing Tanks
	Interstitial Monitoring	This method, used in conjunction with an ATG, must meet one of the following method requirements ( <a href="#">40 CFR 280.43(g)</a> ): (1) <u>Double Wall UST Systems</u> : Detect a release through the inner wall in any portion of the tank that routinely contains product; (2) <u>Secondary Barrier Within the Excavation Zone</u> : Detect a release between the UST system and the secondary barrier; <b>OR</b> (3) <u>Internally Fitted Liner</u> : Detect a release between the inner wall of the tank and the liner, and the liner must be compatible with the product stored.	X	X
Piping ( <a href="#">40 CFR 240.41(b)</a> )	Pressurized	Pressurized piping must have ( <a href="#">40 CFR 280.44</a> ): (1) An <b>automatic line leak detector</b> that detects leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour; operations of the leak detector must be tested annually in accordance with the manufacturer's requirements; <b>AND</b> (2) Annual line tightness testing or monthly monitoring (e.g., vapor monitoring, groundwater monitoring, interstitial monitoring, or other approved methods).	X	X
	Suction	Suction piping must have ( <a href="#">40 CFR 280.44</a> ): (1) Line tightness test every 3 years; <b>OR</b> (2) Monthly monitoring method such as vapor monitoring, groundwater monitoring, interstitial monitoring, or other approved methods.  <b>NOTE:</b> No release detection is required for suction piping if it is designed and constructed to meet the requirements of <a href="#">40 CFR 240.41(b)(2)</a> .	X	X

- d. Testing and Inspections. UST systems must be periodically inspected to verify proper operation and environmental compliance in accordance with Federal, State, and local requirements. The frequency of inspection must be in accordance with applicable regulatory requirements or GSA Policy whichever is more stringent. GSA Policy requires a visual inspection of exposed portions of UST systems be conducted and documented monthly. These inspections should be conducted and documented in conjunction with the monthly O&M Quality Control inspection requirement. The records of inspection must be maintained and available for inspection by regulatory officials.

Federal and State regulations require periodic testing to confirm the storage tank and piping are in compliance and free of leaks. Testing requirements and frequency varies based on State regulations.

- e. Tank Repairs ([40 CFR 280.33](#)). UST repairs shall be performed to prevent releases due to structural failure or corrosion in the UST system and must comply with the following:
- Conducted in accordance with a recognized tank industry standards or an independent testing laboratory;
  - Repaired by the manufacturer's authorized representatives, nationally recognized association codes or practices, or independent testing laboratory (specific for fiberglass-reinforced plastic tanks);
  - Replaced when metal pipe sections and fittings have corroded or been damaged resulting from a release (fiberglass pipes and fittings may be repaired in accordance with the manufacturer's

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specifications). Note: The law requires that when 50% or more of piping, excluding connectors, is repaired, or removed and replaced then 100% of the piping run must be replaced;

- Performed in accordance with tank and piping tightness testing within 30 days of repairs; and
- Tested (cathodically protected UST system) within 6 months.

## 9. EMERGENCY PLANNING AND REPORTING

### A. SPCC Plans

GSA sites that store fuel and meet the following criteria are required to prepare and maintain a SPCC plan:

- Based on the location, the facility could reasonably be expected to discharge oil into or upon U.S. “navigable waters” (broadly defined to include surface waters that are not currently navigable); **and**
- The total aboveground storage capacity exceeds 1,320 gallons of oil (calculation includes containers with a **capacity** of 55 gallons or more) **OR** the total UST capacity is greater than 42,000 gallons of oil.

While each SPCC plan is unique to the facility, there are certain elements that must be included in the SPCC plan ([40 CFR Part 112](#)). Three areas that should be addressed in the plan are:

- Operating procedures that the facility implements to prevent oil spills;
- Control measures installed to prevent oil from entering navigable waters or adjoining shorelines; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that has an impact on navigable waters or adjoining shorelines.

Preparation and implementation of the SPCC plan is the responsibility of the facility owner or operator, but it is often prepared by a contractor and must be certified by a licensed professional engineer. Facilities that meet the Tier I or II criterion have the option to self-certify their plan ([40 CFR 112.3\(g\)](#)).

SPCC plans must be amended within six months whenever there is a change in the facility design, construction, operation, or maintenance that affects the potential for an oil release ([40 CFR 112.4](#)).

### B. Release Reporting

When a release occurs from a FST system, GSA designated personnel or representatives shall implement the site-specific spill response actions and initiate internal notification procedures. Releases include but are not limited to suspected releases ([40 CFR 280.50](#)), overfills and spills ([40 CFR 280.53](#)), and confirmed releases ([40 CFR 280.61](#)); Note: Refer to the Acronyms and Definition appendix of PBS Order 1095.2 for the definition of releases.

#### i. Internal Release Reporting

In the event of a suspected release, overfill and spill, and/or confirmed release, PBS personnel on-site or in the field office shall notify Regional EHS Manager at the time of discovery. The Regional EHS Manager is responsible for determining whether the release is required to be reported to external authorities and provide guidance on appropriate response activities. Regional EHS Managers shall inform the Central Office OFM Facility Risk Management Division of any release subject to external reporting within two (2) hours of discovery. Additional notifications include the Regional Office of Mission Assurance and appropriate regulatory authorities.

#### ii. External Release Reporting

State and local authorities may need to be notified if a spill or release meets certain criteria, including:

- If your facility releases a hazardous substance (equal to or in excess of its reportable quantity) ([40 CFR 302.6](#)) or an extremely hazardous substance (EHS) (threshold planning quantity for fuel is typically 10,000 pounds) ([40 CFR 355.30](#)), call the National Response Center (1-800-424-8802) within twenty-four (24) hours.

- For releases of an EHS over the threshold planning quantity, also notify the state emergency response commission (SERC), local emergency planning committee (LEPC), and local fire department.

Facilities subject to SPCC must report the following:

- If your facility releases more than 1,000 gallons of oil in a single discharge, contact the Environmental Protection Agency (EPA) Regional Administrator within 60 days.
- If your facility releases more than 42 gallons of oil in two discharges within any 12-month period, contact the EPA Regional Administrator within 60 days.

## 10. TANK CLOSURE REQUIREMENTS

Any FST systems that (1) does not meet the release detection requirements of the GSA FST policy and/or (2) has been out-of-service for 29 days must be updated or closed. FST removal, abandonment, and closure shall be conducted in accordance with Federal, State, and local jurisdictions' requirements and performed by contractors licensed to perform such work.

### A. AST Closure Requirements

The closure of ASTs is primarily dictated by the local governing authority. Consult the State agency for specific requirements. Generally, if an AST has remained out of service for a year or more, many States require owners to maintain and monitor the tank, declare the tank inactive, or remove it. If the tank is declared inactive, substances are removed from the AST system (including pipes) and the inside of the tank is cleaned. Tanks are secured by bolting and locking all valves and capping all gauge openings and fill lines. Tanks are also clearly labeled with the date and the words "Out of Service." Samples may be required when removing tanks to determine if any contamination has occurred. Most States require out-of-service tanks to be inspected and meet leak detection requirements before they are put back into service.

### B. UST Temporary and Permanent Closure Requirements ([40 CFR 280 Subpart G](#))

An UST that is out of service for up to 12 months is considered temporarily closed. When a UST has been temporarily closed for 12 months or more, it must be permanently closed or upgraded to meet the new UST system requirements. Listed below are the requirements that must be performed during temporary and permanent closure.

Initial UST Temporary Closure Activities (up to 12 Months)		Permanent UST Closure
Period of 0-3 Months	Period of 3-12 Months	After 12 Months
<ul style="list-style-type: none"> <li>• Continue O&amp;M of corrosion protection;</li> <li>• Continue operation of release detection; <b>AND</b></li> <li>• Report all suspected or confirmed releases.</li> </ul>	<ul style="list-style-type: none"> <li>• Leave vent lines open and functioning;</li> <li>• Cap and secure all other lines, pumps, manways, and ancillary equipment, <b>AND</b></li> <li>• Complete all activities for 0-3 months.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanently close the UST if it does not meet the new UST system performance requirements; <b>OR</b></li> <li>• Upgrade the UST system requirements.</li> </ul>

The following steps must be taken place to permanently close an UST:

- Notify appropriate regulatory authorities at least 30 days before permanent closure;
- Assess closure site for potential contamination;
- Empty tank of all liquids and sludge;
- Remove tank from ground or fill tank with an inert solid (not authorized in all States); and
- Maintain closure documentation.

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## 11. ADMINISTRATIVE AND RECORDKEEPING REQUIREMENTS

### A. FST Management Plans

Each GSA building where GSA owned and/or operated FSTs are housed is required to develop and maintain a tank management plan specific to the location where the tank is installed. The plan shall include a comprehensive inventory of all FSTs and contain the following information, at a minimum:

- GSA building number and building location;
- FST point of contact name and contact information;
- FST owner and operator;
- FST installation year, date of permit registration, and date of closure (if applicable);
- FST status (*i.e.*, currently in use, temporarily, permanently closed) and age,
- FST capacity, construction material, system piping, and substance stored; and
- FST internal and external protections (including spill/overflow protections), and release detection methods.

The plan must also include:

- Copies of tank notifications and reports to state agencies (*e.g.*, installation, closure, leaks, spills, EPCRA, Tier II Reports, etc.);
- SPCC Plans or other release mitigation and response plans;
- A plan for ongoing leak detection tests and repairs;
- Reporting procedures for notifications of releases;
- Copy of UST Operator training certificates;
- PM Guides;
- Filling/transfer procedures;
- Planned upgrades, replacements, closure; and
- Records management system and internal reporting of data to the Regional Office.

The tank management plan may be in the form of a single page document that serves as an index to identify the location of the readily available components of the plan, or it can be a compilation document containing a combination of an index and documents. Regardless of design, the preferred format is electronic. In addition, this plan shall be updated whenever a change requiring notification occurs and stored in a location where it is readily accessible to Regional EHS Managers.

### B. Training

All FST operators must be trained on the building, State and local emergency response procedures. (*e.g.*, product transfer, overflow, shutoff, release response, SPCC, etc.). Properties with GSA owned or operated USTs must also designate personnel for each class of UST Operator. There are three classes of UST Operators:

- Class A operators – responsible for managing resources and personnel, and performs activities such as establishing work assignments to achieve and maintain compliance with regulatory requirements;
- Class B operators – responsible for field implementation of applicable UST regulatory requirements and carries out day to day aspects of operating, maintaining, and recordkeeping for USTs; and
- Class C operators – responsible for first line of response when emergencies occur.

Designated personnel shall successfully complete the appropriate operator training, as required by the state governing authority or in the absence of state training guidelines, as prescribed by the EPA. Training certifications for GSA personnel and contractors should be maintained in a location that is readily accessible. State specific training guides are available through Regional GSA environmental program managers.

### C. Recordkeeping

To provide greater protection against future potential environmental liabilities, GSA Policy requires that all records be maintained for the life of the facility. Tanks subject to this requirement include (1) FST installations completed within 5 years preceding the effective date of this Policy, and (2) all FST installations completed after the effective date of this Policy. Tanks installed more than 5 years preceding the effective date of this Policy shall comply with applicable Federal, state, and local recordkeeping retention requirements.

In case of inspection, all records of compliance with Federal, State, and local regulatory requirements shall be readily available and kept at the FST site or in accessible information technology systems.

Table 3 outlines records, and their associated retention times, that are required to be maintained by Federal, State, and local regulations.

**Table 3: FST Recordkeeping Requirements and Retention Timelines**

<b><u>AST Operation Records</u></b>	<b>State/Local Retention Requirement</b>	<b>GSA Policy Requirement</b>
Corrosion Protection Equipment Operations; AST System Repairs; Tank Closure, and other Operation Records as required	Dependent on state/local regulations; consult with appropriate governing agencies	Life of the facility
<b><u>AST Release Detection Records</u></b>	<b>State/Local Retention Requirement</b>	<b>GSA Policy Requirement</b>
Manufacturer's Written Performance Claims; Sampling, Testing or Monitoring Results; Calibration, Maintenance, and Repair of Release Detection Equipment Documentation; Required Calibration and Maintenance Schedules (provided by the release detection equipment manufacturer)	Dependent on state/local regulations	Life of the facility
<b><u>UST Operation Records</u></b>	<b>Federal Retention Requirement</b>	<b>GSA Policy Requirement</b>
Expert Analysis of Potential Site Corrosion	No retention period established	Life of the facility
Corrosion Protection Equipment Operations	Results of (1) the last 3 inspections; <b>and</b> (2) testing from the last 2 inspections	Life of the facility
UST System Repairs	Operating life of the UST system	Life of the facility
Permanent Closure Site Investigation and Notices of No Further Action	3 years after permanent closure	Life of the facility
<b><u>UST Release Detection Records</u></b>	<b>Federal Retention Time</b>	<b>GSA Retention Time</b>
Manufacturer's Written Performance Claims	5 Years	Life of the facility
Sampling, Testing, or Monitoring Results	1 Year	Life of the facility
Calibration, Maintenance, and Repair of Release Detection Equipment Documentation	1 Year	Life of the facility
Required Calibration and Maintenance Schedules (provided by the release detection equipment manufacturer)	5 Years	Life of the facility

In addition to the records listed in the table above, GSA Policy requires the following records also be maintained according to GSA administrative records requirements:

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- Personnel training records, including UST Operator certifications and other state/local required FST training documentation;
- All FST maintenance and monitoring records (not included above), including work orders and inspection reports;
- Documents such as tank management plans, SPCC plans, and other release mitigation and response plans; and
- Copies of tank notifications and reports to external regulatory agencies.

**NOTE:** Paper records do not need to be maintained at the FST site but must be readily available and accessible at all times. The designated central repository for FST records is the National Computerized Maintenance Management System (NCMMS). For facilities where the NCMMS has not been fully deployed, the Facility Manager must retain these documents at the facility or in other accessible GSA's information systems as an interim measure.

## **APPENDIX A: RESOURCES**

<b>Topics</b>	<b>Applicable Laws &amp; Regulations</b>
Underground Storage Tanks (USTs); Installation and Design; Operating Requirements; Corrosion Protection, Repair and Release Reporting; Release Detection, Recordkeeping, Temporary and Permanent Closure	Underground Storage Tanks Requirements ( <a href="#">40 CFR Part 280</a> )
Aboveground Storage Tanks (ASTs); Bulk Storage Containers; Spill Prevention, Control and Countermeasures (SPCC) Plan; Secondary Containment; Testing and Inspection	Oil Pollution Prevention ( <a href="#">40 CFR Part 112</a> )
Hazardous Substance Release Reporting, Hazardous Chemical Use Notifications, Threshold Planning Quantity, Emergency Release Notification, Hazardous Chemical Reporting	<a href="#">Designation, Reportable Quantities, and Notification</a> (40 CFR Part 302) <a href="#">Emergency Planning and Notification</a> (40 CFR Part 355) <a href="#">Hazardous Chemical Reporting: Community Right-To-Know</a> (40 CFR Part 370)
<b>Content</b>	<b>Additional Resources</b>
EPA UST Regulatory Requirements	<a href="#">EPA Office of Underground Storage Tanks</a>
PBS Order 1095.2	List of Acronyms and Definitions

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## **APPENDIX B: RELATED PUBLICATIONS**

The following list of publications includes standards applicable to the installation, operation and maintenance, and decommissioning of FSTs.

### **Statutes**

1. The Oil Pollution Act (OPA) of 1990; 33 U.S.C. 2702 to 2761.
2. CWA; 33 U.S.C. § 1251 et seq. (1977).
3. RCRA; 42 U.S.C. § 321 et seq. (1976).
4. National Environmental Policy Act (NEPA) of 1969; 42 U.S.C. 4321-4347.

### **Code of Federal Regulations**

1. 40 CFR Part 110, Discharge of Oil.
2. 40 CFR Part 112, Oil Pollution Prevention.
3. 40 CFR Part 280, Technical Standards and Corrective Action Requirements for Owners and Operators of UST.
4. 33 CFR Part 154, Facilities Transferring Oil or Hazardous Material in Bulk.
5. 29 CFR Part 1926, Safety and Health Regulations for Construction.

### **Executive Orders**

1. E.O. 12088 – Federal Compliance with Pollution Control Standards.

### **Consensus Standards – NFPA**

1. NFPA 1 – Fire Code.
2. NFPA 30 – Flammable and Combustible Liquids Code.
3. NFPA 30a – Code for Motor Fuel Dispensing Facilities and Repair Garages.
4. NFPA 31 – Standard for Installation of Oil Burning Equipment.
5. NFPA 37 – Installation/Use of Stationary Combustion Engines.
6. NFPA 58 – Liquefied Petroleum Gas Code.
7. NFPA 110 – Emergency and Standby Power Systems.

### **Consensus Standards – International Code Council**

1. International Building Code.
2. International Fire Code

### **Consensus Standards – American Petroleum Institute (API)**

1. RP 545 – Recommended Practice for Lightning Protection of Aboveground Storage Tanks for Flammable or Combustible Liquids.
2. RP 574 – Inspection Practices for Piping System Components.
3. RP 575 – Inspection of Atmospheric and Low Pressure Storage Tanks.

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4. RP 1604 – Closure of Underground Petroleum Storage Tanks.
5. RP 1615 – Installation of Underground Petroleum Storage Tanks.
6. RP 1621 – Bulk Liquid Stock Control at Retail Outlets.
7. RP 1632 – Cathodic protection of underground petroleum storage tanks and piping systems.
8. RP 2003 – Protection against Ignitions Arising out of Static, Lightning and Stray Currents.
9. RP 2350 – Overfill Protection for Storage Tanks in Petroleum Facilities.
10. STD 510 – Pressure Vessel Inspection Code (Maintenance Inspection Rating Repair and Alteration).
11. STD 650 – Welded tanks for oil storage.
12. STD 653 – Tank Inspection, Repair, Alteration, and Reconstruction.
13. STD 1631 – Interior Lining and Periodic Inspection of Underground Storage Tanks.
14. STD 2000 – Venting Atmospheric and low-pressure storage tanks.
15. STD 2015 – Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks.
16. Publication 327 – Aboveground Storage Tank Standards: A Tutorial.
17. Publication 334 – A Guide to Leak Detection for Aboveground Storage Tanks.
18. Publication 910 – Digest of State Boiler, Pressure Vessel, Piping and Aboveground Storage Tank Rules and Regulations.
19. Publication 1571 – Diesel Fuel—Questions and Answers for Highway and Off-Highway Use.
20. Publication 1628 – A Guide to the Assessment and Remediation of Underground Petroleum Releases.
21. Publication A1632S – Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems.
22. Spec 12P – Specifications for Fiberglass Reinforced Plastic Tanks.

#### **Consensus Standards – Steel Tank Institute (STI)**

1. STI P3 – Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks.
2. STI F894 – Act-100® Specification for External Corrosion Protection of FRP Composite Steel USTs.
3. STI F921 – F921 Standard for Aboveground Tanks with Integral Secondary Containment.
4. STI F941 – Standards for Fireguard® Thermally Insulated Aboveground Storage Tanks.
5. STI F961 – ACT-100U Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks.
6. STI SP001 – Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids.
7. STI SP031 – Standard for Repair of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible & Flammable Liquids.
8. STI R821 – sti-P3 Installation Instructions.
9. STI R891 – RP for Hold Down Strap Isolation.
10. STI R892 – RP for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems.
11. STI R912 – Installation Instructions for Shop Fabricated Aboveground Storage Tanks for Flammable, Combustible Liquids.
12. STI R913 – Act-100 Installation Instructions.

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13. STI R942 – Fireguard Installation & Testing Instructions for Thermally Insulated, Lightweight, Double Wall Fireguard Aboveground Storage Tanks.
14. STI R971 – ACT-100-U® Installation Instructions.
15. STI R972 – RP for the Addition of Supplemental Anodes to sti-P3® USTs.

#### **Consensus Standards – Petroleum Equipment Institute (PEI)**

1. RP 100 – Installation of Underground Liquid Storage Systems.
2. RP 200 – Installation of Aboveground Storage Systems.
3. RP 600 – Overfill Prevention for ASTs.
4. RP 900 – UST Inspection and Maintenance

#### **Consensus Standards – ASTM**

1. A185 – Welded Steel Wire Fabric for Concrete Reinforcing.
2. A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcing.
3. C33 – Concrete Aggregates-Deleterious Substances.
4. C94 – Ready-Mixed Concrete.
5. C150 – Portland Cement.
6. C260 – Air-Entraining Admixtures for Concrete.
7. C494 – Chemical Admixtures for Concrete.
8. D1556 – Density of Soil in place by the Sand-Cone Method.
9. D1557 – Moisture-Density Relations of Soils.
10. D4021 – Glass Fiber Reinforced Polyester Underground Petroleum Storage Tanks.

#### **Consensus Standards – Underwriter Laboratories (UL)**

1. UL Standard 125 – Flow Control Valves for Anhydrous Ammonia and LP-Gas.
2. UL Standard 142 – Standard for Safety for the Aboveground Storage of Flammable and Combustible Liquids.
3. UL Standard 971 – Nonmetallic Underground Piping for Flammable Liquids.
4. UL Standard 1316 – Standard for Safety Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products.
5. UL Standard 1746 – Standard for Safety: External Corrosion Protection Systems for Steel Underground Storage Tanks.
6. UL Standard 2085 – Standard for Safety Protected Aboveground Tanks for Flammable and Combustible Liquids.