

UNDERGROUND STORAGE TANKS AND LEAKING UNDERGROUND STORAGE TANKS

SUMMARY:

- Underground Storage Tank (UST) systems store billions of gallons of petroleum products and are located in almost every community across the country at retail facilities, such as service stations and convenience stores, and at non-retail facilities.
 - As of September 2023, the total active UST universe consists of approximately 536,500 petroleum USTs and 1,950 hazardous substance USTs, located at approximately 192,000 facilities.
 - 21% of the U.S. population lives within 1/4 mile of an open UST system. 94% lives within 3 miles.
- Leaking USTs (LUSTs) are one of the most common sources of groundwater contamination. Groundwater is the source of drinking water for nearly half of all people living in the United States. Benzene, a known carcinogen, along with naphthalene and lead are examples of toxic contaminants that can come from UST releases. Harmful vapors from UST releases can impact indoor air causing negative health effects and can accumulate to the point where they reach explosive levels.
 - Since the inception of the UST program, approximately 573,000 releases have been confirmed and 516,000 cleanups completed.
 - Even though approximately 90 percent of all releases have been cleaned up, about 57,000 releases remain. Many releases are technically challenging, lack money for cleanup, or are abandoned.
 - Despite best efforts to prevent releases, more than 4,000 new releases are confirmed each year.
 - Since 2008, EPA, state, and credentialed Tribal inspectors conducted over 1.3 million on-site inspections at federally regulated UST facilities. Inspections increase compliance, which help reduce UST releases.

BACKGROUND:

- Relevant Laws
 - In 1984, Congress added Subtitle I to the Solid Waste Disposal Act (SWDA) through the Hazardous and Solid Waste Amendments, creating a federal program to regulate USTs containing petroleum and hazardous chemicals.
 - In 1986, Congress amended Subtitle I of SWDA and created the LUST Trust Fund to oversee cleanups by responsible parties, enforce cleanups by recalcitrant parties, and pay for cleanups at sites where the owner or operator is unknown, unwilling, or unable to respond, or which require emergency action.
 - In August 2005, Congress amended Subtitle I of SWDA and created the Underground Storage Tank Compliance Act of 2005 (in Title XV, Subtitle B of the Energy Policy Act of 2005). This legislation focused on requiring UST inspections and other release prevention measures.

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- EPA Regulations
 - In 1988, EPA issued UST regulations designed to reduce the chance of releases from USTs, detect leaks and spills when they do occur, secure a prompt cleanup, and ensure an owner or operator will have the resources to pay for costs associated with cleaning up releases and compensating third parties.
 - In July 2015, the EPA revised the 1988 federal UST regulations by increasing emphasis on properly operating and maintaining UST equipment. The revisions help prevent and detect UST releases and help ensure all USTs in the United States, including those in Indian country, meet the same minimum standards.
- Implementation Approach
 - Highly delegated program
 - All states and territories are the primary implementing agencies of this program with ongoing support from EPA.
 - EPA maintains responsibility for implementing the program in Indian country.

KEY EXTERNAL STAKEHOLDERS:

☒ Congress ☒ Industry ☒ States ☒ Tribes ☒ Media
☒ Other Federal Agency ☒ NGO ☐ Other (name of stakeholder) _____

PERFORMANCE/PROGRAM MEASURES:

Underground Storage Tanks Program Accomplishments as of September 30, 2023		
Performance Measure	FY23 Accomplishments	Cumulative Accomplishments
UST Universe	N/A	536,503 active petroleum USTs and 1,951 hazardous substance USTs (at approx. 192,000 facilities)
On-site Inspections	84,769	Over 1.3 million since 2008
Confirmed Releases	4,354	573,296
Cleanups Completed	6,596	515,859
Technical Compliance Rate	58.0%	58.0%
Releases Remaining to be Cleaned Up	N/A	57,437

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ISSUES AND CHALLENGES:

- **Emerging Fuels and Compatibility**
Safely accommodate emerging fuels, such as biodiesel and higher-ethanol gasoline (e.g., E-15) in UST systems. Storing fuels in incompatible UST systems can result in systems not functioning correctly and potentially causing a release to the environment. In addition, corrosion is appearing on metal components inside USTs storing diesel fuel. Corrosion can affect UST equipment functionality and could lead to releases.
- **Aging Tank Infrastructure**
The average UST is approximately 27 years old. As USTs age there is increased concern about the long-term viability of the system, the presence of existing contamination, and potential compatibility issues. EPA needs to ensure older USTs are properly closed when they reach the end of their life, and any discovered contamination is properly addressed.
- **Electric Vehicles**
As the vehicle fleet becomes electrified EPA and states will need to ensure a proper transition from older USTs, and that state funding (often based on fuel taxes/fees) evolves to ensure sufficient funding for cleanups and program operations.
- **Innovations in Remediation Technology and Approaches**
As scientific understanding and technology evolve, EPA works to integrate those new approaches and technologies to improve and expedite LUST cleanups.
- **Revitalization and Redevelopment**
Many UST release sites are great candidates for brownfields revitalization and redevelopment investments. EPA continues to work with its partners to identify sites that are good candidates for brownfields redevelopment. Also, EPA is pursuing job training opportunities for UST testing and remediation professionals.
- **Controversial LUST sites**
There is significant ongoing work at the Red Hill storage facility on Joint Base Pearl Harbor – Hickam. Please see separate fact sheet on this site.
- **Technology/Data/AI**
EPA will harness the power of technology to help with program compliance, enforcement, and information sharing with the public. For example, the UST Finder web-based mapping application displays geospatial data on tanks, facilities, and releases. Its data layers help prepare for and respond to extreme weather events and provide a new way to look at LUSTs and groundwater vulnerability.

LEAD OFFICE/REGION: HQ-- OUST/OLEM, OTHER KEY OFFICES: OECA, OGC AND ALL REGIONS