FY 2011 Annual Report On The Underground Storage Tank Program

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For more than 25 years, EPA, states, territories, tribes, and other partners have made significant progress in preventing, detecting, and cleaning up leaks from underground storage tanks (USTs).

This report provides a snapshot of UST program activities in fiscal year (FY) 2011 (October 1, 2010 - September 30, 2011). The report presents advances made in preventing releases and conducting cleanups. These advances ultimately result in preventing environmental contamination, protecting groundwater, and further protecting human health and the environment from UST releases. The UST program is comprised of a meaningful partnership among states, territories, tribes, and EPA, and a host of other stakeholders.

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FY 2011 UST Program Accomplishments

At the end of FY 2011, there were approximately 590,000 federally-regulated, active USTs at approximately 212,000 sites across the country. EPA provides money directly to tribes and states for developing and implementing their prevention and cleanup programs. Collectively, the UST program has accomplished a great deal.

Prevention

- Active UST compliance rates continue to increase, with more than 70 percent of active USTs complying with requirements to prevent and detect leaks (exceeding EPA's goal of 66 percent compliance)
- The UST compliance rate in Indian country was 61percent
- The number of new UST releases identified each year continues to decline, with just under 6,000 new leaks reported in FY 2011 (meeting EPA's goal to reduce annual releases to fewer than 8,550); this is a 6 percent drop in the number of new releases reported compared to FY 2010

Cleanup

- 30 of the 54 states and territories that received leaking underground storage tank (LUST) American Recovery and Reinvestment Act money completed their work
- Of the 501,000 releases reported since the beginning of the program, UST partners completed more than 413,000 cleanups or about 82 percent, leaving a backlog of almost 88,000 releases remaining to be cleaned up
- UST partners cleaned up 11,169 sites, meeting approximately 91 percent of EPA's FY 2011 goal to clean up 12,250 LUST sites

An old gas station may indicate underground storage tanks are nearby

FY 2011 GPRA* National UST Program Goals And Accomplishments

	Goal	Actual
Significant Operational Compliance Rate	66%	70.9%
New Reported Releases	<8,550	5,998
Cleanups-Total	12,250	11,169
Cleanups-Indian Country	38	42

*Government Performance Results Act of 1993

To keep the public informed, EPA posts mid and end of year activity reports that provide information on compliance, releases, and cleanups across the country. See the FY 2011 end of year activity report.

Preventing Releases

The UST program achieved significant milestones in detecting and preventing releases. Our past successes, our collaborative relationships with the tanks community, and the valuable work at state and local levels collectively supported the UST program's prevention efforts. EPA will continue to work with UST stakeholders, exploring ways to leverage our resources and ensure we maintain a robust national prevention program.

UST Universe - End Of FY 2011

States	Active Tanks:	587,517
	Closed Tanks:	1,762,294
Indian Country	Active Tanks:	2,587
	Closed Tanks:	5,899

Reducing Confirmed Releases

In FY 2011, EPA, states, territories, and tribes focused on bringing UST systems into compliance and keeping them in compliance with leak detection and release prevention requirements. One way the program assesses the relative success of these prevention efforts is to measure the number of confirmed releases each year.

EPA achieved its FY 2011 goal to reduce confirmed tank releases to fewer than 8,550. There has been a steady reduction in annual underground storage tank confirmed releases, from almost 67,000 in FY 1990 to 5,998 in FY 2011.

Energy Policy Act Implementation

When Congress passed the Energy Policy Act in August 2005, EPA, state, territorial, and tribal underground storage tank programs were presented with a mandate that focused on reducing UST releases and required numerous changes to tank programs. EPA, states, territories, and tribes have shown tremendous dedication and made significant progress toward meeting all of the act's requirements and strengthening UST release prevention programs.

- All states have grant agreements in place to implement Energy Policy Act provisions
- Most states met these major requirements – secondary containment or financial responsibility provision, delivery prohibition, state UST compliance report, initial two year inspections, public record posted, and three year inspections
- Together, EPA and tribes are continuing to implement the 2006 tribal strategy and further the goals of the UST program in Indian country

Although our collective progress over the past six years is impressive, state, territorial, and tribal UST programs are faced with a great deal of ongoing work to continue implementing the Energy Policy Act requirements. The inspection requirement is a good example of this. States and territories did much to meet the initial three year cycle of inspecting all UST facilities by August 2010; yet the three year inspection cycle is a rolling three year requirement continuing into the future.

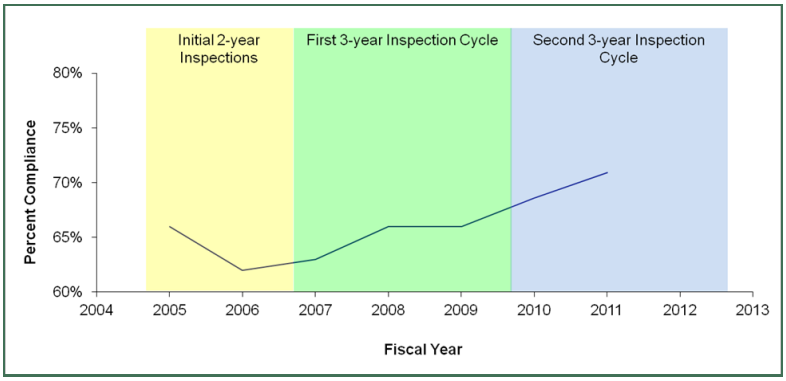
Pursuing UST Facility Compliance

One of the key elements in preventing releases is to increase a facility's operational compliance with UST regulations. Significant operational compliance (SOC) means that a facility has the necessary equipment required by current UST regulations to prevent and detect releases **and** performs the necessary UST system operation and maintenance. In FY 2011:

- The **national SOC rate** was **70.9 percent**, which is almost 5 percent above our target rate of 66 percent, yet still allows room for continued improvement
- The **SOC rate in Indian country** was **61 percent**, which is 5 percent below the national goal of 66 percent; SOC rates in Indian country vary from year to year due to the relatively small number of facilities, but EPA is working to close the gap with the national rate

Three Year Inspections Increase UST Compliance

One of the key elements in preventing releases is to increase a facility's operational compliance with UST regulations. Now that we have completed the initial two year inspections (some UST facilities were never inspected before the inspection requirement, likely accounting for the initial dip in compliance rate during the two year cycle) and states are inspecting every UST facility at least once every three years, we are seeing compliance rates increase. We expect the compliance rate to continue to improve as UST operators are trained on the UST requirements.



Preventing Releases In Indian Country

Tribes and EPA worked to improve UST compliance in Indian country during FY 2011 by enhancing inspection efforts, developing additional compliance-focused assistance agreements with tribes, and providing training to tribal environmental professionals and facility owners and operators.

At the end of FY 2011, there were 2,587 active USTs in Indian country. While compliance rates fell in FY 2011, confirmed releases also fell, indicating progress in preventing releases.

Designating tribal inspectors as authorized representatives of EPA to inspect USTs can help increase the geographic coverage and frequency of inspections in Indian country. It also helps enhance relationships and increase the capabilities of tribal inspectors. Since EPA's commitment in 2006 to issue federal credentials for tribal inspectors, 11 inspectors received credentials; although currently eight hold credentials as a result of changes in tribal staff responsibilities and turnover. In FY 2011, these federally-credentialed tribal inspectors contributed significantly to meeting the inspection requirements of the Energy Policy Act by completing 75 inspections. EPA anticipates at least two additional tribal staff will receive federal credentials in FY 2012.

In May 2011, the Oneida Tribe of Indians of Wisconsin hosted our fourth annual tribal-EPA underground storage tank meeting in Oneida, Wisconsin. Meeting participants worked together to identify tribal issues, build relationships, and continue partnerships and improvements in Indian country UST programs.

Addressing Alternative Fuels

EPA published UST compatibility guidance in the July 5, 2011 *Federal Register*. The guidance is a resource tank owners can use to demonstrate their tank systems are compatible with ethanol blends greater than 10 percent or biodiesel blends greater than 20 percent. According to the guidance, acceptable methods for demonstrating compatibility include using equipment that is certified or listed by a nationally recognized, independent testing laboratory for use with the fuel stored; or using components approved by the manufacturer to be compatible with the fuel stored.

EPA continues to periodically observe unusual and unexplained conditions at tanks containing ethanol, as well as other substances. The UST program is working to understand these anomalies and avoid releases from compatibility problems.

In FY 2011, EPA provided $32.3 million to states and territories for UST prevention activities. EPA also provided $2 million for the UST prevention program in Indian country.

Proposed Changes To UST Regulations

On November 18, 2011, EPA published proposed changes to the underground storage tank regulations in the *Federal Register*. This is the first time EPA is proposing significant revisions to the federal UST regulations since they were first promulgated in 1988. These revisions will create equal UST release protection in Indian country relative to that provided by the Energy Policy Act of 2005 in the rest of the country. The proposal will also improve the 1988 UST regulations by closing some regulatory gaps, accommodating new technologies, and focusing on properly operating and maintaining existing UST systems. This proposal improves prevention and detection of UST releases, which are one of the leading sources of groundwater contamination. The public comment period closes April 16, 2012.

EPA is proposing to revise the UST technical regulation in 40 CFR part 280 by:

- Adding secondary containment requirements for new and replaced tanks and piping
- Adding operator training requirements for UST system owners and operators
- Adding periodic operation and maintenance requirements for UST systems
- Removing certain deferrals
- Adding new release prevention and detection technologies
- Updating codes of practice
- Making editorial and technical corrections

EPA is also proposing to update the state program approval requirements in 40 CFR part 281 to incorporate the proposed changes to the UST technical regulation listed above.

In developing the proposed revisions, EPA reached out extensively to affected and interested UST stakeholders. This included environmentalists, community groups, states, tribes, owners and operators, equipment manufacturers, federal facilities, and small businesses. EPA was sensitive to future costs for UST owners and operators and, consequently, minimized required UST system retrofits in the proposed revisions. We appreciate feedback on the proposal, and we will carefully consider all comments.

Cleaning Up Releases

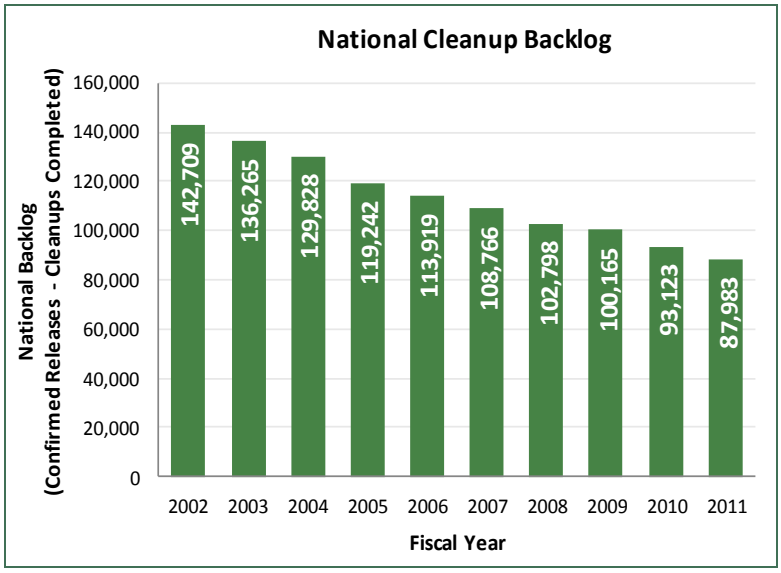
The UST program continues to make great progress in cleaning up leaking underground storage tanks. EPA works with states, territories, and tribes to clean up LUST sites and address the hurdles in reducing the backlog of cleanups.

In FY 2011, EPA and our state, territorial, and tribal partners completed 11,169 cleanups, 42 of which were in Indian country. The cleanup backlog, which is the difference between the cumulative number of confirmed releases and cleanups completed, also continued to decline from 142,000 sites a decade ago to 87,983 sites at the end of FY 2011.

National Cleanup Backlog Study

In September 2011, EPA issued its analysis of the backlog, *The National LUST Cleanup Backlog: A Study of Opportunities*. To characterize LUST releases, EPA analyzed LUST data from 14 states, particularly those releases where cleanup was not complete. The study covers both data findings and opportunities states found to reduce their backlogs. EPA is working with our partners to implement backlog reduction strategies, based on the analysis in the study. Study highlights include:

- Many releases are old; over 71 percent of open releases were 10 years old or older
- Many old releases are in the early stages of cleanup; only 50 percent of releases 10 years old and older have started remediation
- Almost 80 percent of remaining releases impact groundwater
- Available funding and staff workload are limiting factors

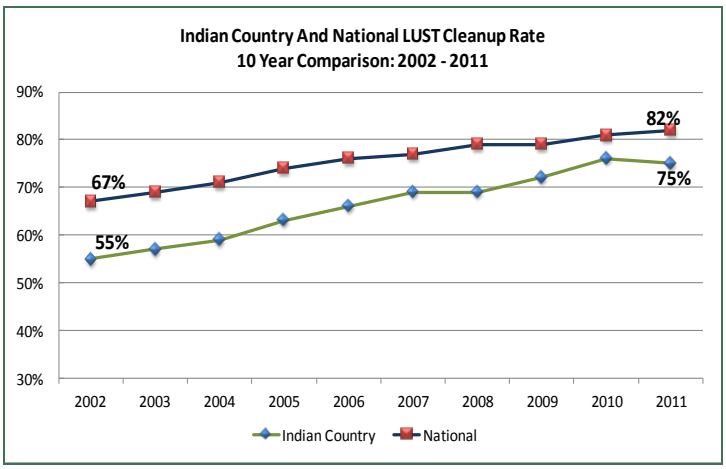


Continuing Cleanup Progress In Indian Country

EPA has primary responsibility for implementing the LUST program in Indian country and actively works with tribes to identify, assess, and clean up UST releases. In FY 2011, EPA completed 42 cleanups in Indian country, exceeding the goal of 38 cleanups. This success is partly a result of focused efforts to complete remaining cleanups at older sites and increased use of national and regional Indian country cleanup contracts. For nearly a decade, LUST Trust Fund money has supported cleanup contracts EPA maintains for cleanup activities in Indian country. These contracts help assess LUST Trust Fund eligible sites; design corrective action plans; and remediate contaminated sites.

Over the past five years, the LUST cleanup backlog in Indian country has remained relatively steady. Completing cleanups and reducing the backlog of Indian country sites has become more difficult because EPA is addressing sites that require complex cleanups and take more time and resources to complete. In addition, some EPA regions are conducting comprehensive surveys to identify abandoned tanks; some of these tanks may have unreported releases that will add to the backlog of sites. EPA will need to continue working diligently in order to reach our FY 2012 goal of completing 42 cleanups in Indian country.

In FY 2011, EPA provided $63.1 million to states and territories for LUST cleanups. EPA also provided $3.1 million for LUST cleanups in Indian country.



Over the last decade, the cleanup rate in Indian country lagged behind the national rate by about 10 percent. In FY 2011, the gap was reduced to 7 percent.

Progress At Petroleum Brownfields

In FY 2011, EPA made significant progress facilitating the reuse and revitalization of petroleum-contaminated brownfields sites.

EPA published *Opportunities For Petroleum Brownfields*, which focuses on developing solutions for petroleum brownfields. The report presents examples of successful reuse projects, and funding and technical assistance resources.

EPA reached out to stakeholders, fostering a greater appreciation of their role in community and area-wide revitalization efforts. EPA supports integrating UST sites and the growing need for access to health and healthcare when communities consider potential reuses of petroleum brownfields sites. This integration is starting to take shape along the Selma to Montgomery Civil Rights Trail and in Florida's Highway to Healthcare Initiative. EPA envisions harnessing these and other reuse options as exit strategies for sites currently lingering in corrective action backlogs that could be more systematically integrated into community development plans. EPA is also working with other programs to capture the results of these and other revitalization opportunities.

Petroleum Vapor Intrusion

One of the UST program's continuing technical challenges is how best to address petroleum vapor intrusion (PVI) at LUST sites. Petroleum hydrocarbon vapors from LUSTs can migrate into inhabited buildings and threaten public health and safety.

In 2011, EPA developed draft guidance to assist regulators, consultants, and other practitioners in investigating and assessing petroleum-contaminated sites where PVI may occur. The draft PVI guidance will focus on federally-regulated Subtitle I LUST sites, which are typically gas stations. It will contain information and practices that may be useful at other sites (such as fuel terminals and airport hydrant systems) where petroleum contamination and PVI are potential concerns. The draft PVI guidance will be a companion to EPA's Office of Solid Waste and Emergency Response comprehensive document, which will address vapor intrusion from non-petroleum sources (such as chlorinated hydrocarbons and volatile inorganic compounds). Both guidances will be available in November 2012.

Also in 2011, OUST issued a paper on the differences between petroleum hydrocarbon vapors and chlorinated solvent vapors and developed a web-based compendium of technical information on PVI.

ARRA Money Advances LUST Assessments And Cleanups

The LUST provision of the American Recovery and Reinvestment Act of 2009 provided $200 million of LUST Trust Fund money to assess and clean up releases of contamination from federally-regulated USTs. States and territories made significant progress in assessing and cleaning up LUST releases with LUST Recovery Act money. This money resulted in substantial environmental protection, while creating or retaining hundreds of jobs, averaging 285 jobs per quarter in FY 2011. The chart below demonstrates the UST program's accomplishments and performance.

LUST Recovery Act Performance Measures	Cumulative Results 2/17/09 – 9/30/11
Site assessments initiated	1,319
Site assessments completed	1,660
Cleanups initiated	1,659
Cleanups completed	1,617

As of September 2011, LUST Recovery Act money was spent at 2,818 sites where one or more of the measures were achieved. In addition, LUST Recovery Act money contributed to other assessments and cleanups at 3,650 additional sites which did not begin as Recovery Act projects and are not yet completed.

In 2011, EPA continued its work to clean up sites in Indian country using LUST Recovery Act money, which EPA allocated to existing cleanup contracts with Native Alaskan or Native American firms. This one time addition of money substantially increased EPA's ability to assess and clean up leaking underground storage tank sites in Indian country. This money supported work at approximately 56 sites in Indian country benefiting over 23 tribal communities.

As of September 2011, 30 of the 54 states and territories that received LUST Recovery Act money completed their work. Most of the remaining states will complete their work in FY 2012, ensuring additional accomplishments and jobs. See LUST Recovery Act on EPA's website for more information.

Sampling methane from a groundwater monitoring well at a LUST site

March 2012

A Letter To UST Stakeholders From Carolyn Hoskinson, Director EPA's Office of Underground Storage Tanks

This report shows many of the past year's accomplishments, which are the result of the combined efforts of all underground storage tank partners. I think our tank partners have a very positive relationship. From where I sit, the UST program has honest dialogue, committed partners, and partners working toward common goals. We certainly don't agree on every issue in every circumstance--I'd be worried if we did. To me, the key to success is to listen carefully, reflect thoughtfully, and compromise when necessary while maintaining integrity. After more than five years in the UST program, that's what I've experienced: from equipment manufacturers, to service providers, to tank owners and operators, and to tribes, states, and EPA. If we can keep that up, we can continue to thrive.

Looking forward, I am well aware of the challenges looming for the national UST program in 2012 and beyond. We will certainly see continued tightening of federal, state, territorial, and tribal budgets, as well as private sector budgets. Dwindling money will affect our work and how we do it. Nonetheless, our goals are straightforward: ***Prevent leaks from tanks. Find leaks and clean them up.*** Easier said than done, I know, but we've done a great job so far, and I expect that to continue, despite the challenges. With that in mind, here's what we are focusing on in 2012.

Continue To Strengthen Partnerships

- Work with tribes to continue implementing the tribal-EPA UST strategy
- Find new and creative ways to keep in touch with all partners, despite having less money, especially fewer travel dollars

Prevent Leaks

- Continue to pursue Energy Policy Act of 2005 mandates and deadlines
  - ♦ Meet the 2012 operator training requirement
  - ♦ Ensure each UST facility in the country is inspected once every three years
- Continue the process to update our regulations
- Address technical and regulatory issues involved with alternative fuels

Find Leaks And Clean Them Up

- Building on the results of our backlog study, work with partners to develop and implement strategies to reduce the cleanup backlog
- Close out work under the LUST provision of the American Recovery and Reinvestment Act of 2009
- Develop strategies to help revitalize communities by cleaning up abandoned gas station sites
- Bolster the availability of adequate money for cleanups through state funds, insurance, and other mechanisms
- Provide support on technical issues, such as identifying fuel constituents and evaluating vapor intrusion and other exposure pathways

We have an enormous job to do, and it's important. Although underground storage tanks might not be the hottest issue on people's minds across the country, it would be if tanks in their neighborhoods were leaking and jeopardizing their homes and drinking water; right? But, if we continue to do our jobs well, that's one less thing our neighbors need to worry about. I challenge each of you reading this to join me; let's stick together, embrace optimism, and forge ahead!

Sincerely,

UST Community Engagement

In 2011, EPA worked with states and EPA regions to develop two documents about community engagement and the underground storage tank program.

- *Overview Of State Community Engagement Plans And Websites* summarizes community engagement plans for a sample of state and territorial UST programs; it highlights practices that encourage meaningful community engagement
- *Community Engagement Resources (Toolbox) For Underground Storage Tank Programs* provides resource materials and assistance on how to better communicate and involve stakeholders at sites that warrant additional community engagement; EPA welcomes additional resources for the toolbox

Helping Tribes Improve Compliance

EPA's five-year assistance agreement with the Inter Tribal Council of Arizona, Inc. (ITCA) provides UST compliance assistance training to tribal personnel and owners and operators in Indian country. The goal of this effort is to improve UST facility compliance throughout Indian country. In FY 2011, ITCA supported this goal by:

- Training approximately 275 tribal representatives in UST issues, such as: compliance with prevention regulations, overview of requirements, installations, and operation and maintenance
- Developing written resources about health and environmental hazards from USTs, operations and maintenance, and best management practices
- Fostering communication and opportunities for collaboration among tribes and EPA on UST issues

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U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response
Office of Underground Storage Tanks