



## FY 2009 Annual Report On The Underground Storage Tank Program

For a quarter of a century, EPA, states, tribes, and other partners have made significant progress in preventing, detecting, and cleaning up leaks from underground storage tanks (USTs). In fiscal year (FY) 2009, EPA's UST program continued these efforts by increasing prevention activities to reduce the number of new releases and furthering the cleanup of existing releases. The program exceeded its established goals for the fiscal year and continued to review existing tank regulations, with a goal of updating them to ensure Energy Policy Act requirements apply to all tanks. EPA worked with regions and states to implement the leaking UST (LUST) Recovery Act provision, which provided \$200 million to assess and clean up UST releases. Also, EPA developed new information resources to provide relevant and up-to-date information to states, territories, tribes, and other tank stakeholders.

This report provides a snapshot of program activities conducted in FY 2009 (October 1, 2008 - September 30, 2009) and the advances made in preventing releases, conducting cleanups, and implementing the LUST provision of the Recovery Act. The success and progress of the program during the past year are due to the support and dedication of EPA's partners to prevent groundwater contamination and further protect human health and the environment from UST releases.

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### FY 2009 UST Program Highlights

At the end of FY 2009, there were approximately 611,500 federally-regulated, active USTs at approximately 223,000 sites across the country. Collectively, the UST program has accomplished a great deal.

#### Prevention

- ✓ Two-thirds of active USTs are fully complying with requirements to prevent and detect leaks.
- ✓ UST partners increased inspection efforts in order to meet the first three-year inspection mandate by 2010, which is required by the Energy Policy Act of 2005.
- ✓ The number of new UST releases identified each year continues to decline, with just over 7,100 new leaks found in FY 2009 (meeting EPA's goal to reduce annual releases to fewer than 9,000).
- ✓ EPA continued regulation development to incorporate Energy Policy Act of 2005 requirements and review existing regulations.

#### Cleanup

- ✓ EPA implemented the LUST provision in the American Recovery and Reinvestment Act of 2009, providing support to states and territories.
- ✓ Of the 488,000 releases reported since the beginning of the program, UST partners have completed more than 388,000 cleanups or about 80 percent, leaving a backlog of just over 100,000 releases remaining to be cleaned up.
- ✓ In FY 2009, UST partners cleaned up 12,944 sites, exceeding EPA's annual goal to clean up 12,250 LUST sites.
- ✓ EPA continued to promote cleaning up and reusing petroleum brownfields.
- ✓ EPA continued our study to characterize the LUST cleanup backlog and improve the pace of cleanups.



Underground storage tanks are located at gas stations and other non-retail locations

### FY 2009 GPRA\* National UST Program Goals And Accomplishments

	Goal	Actual
<b>Cleanups — Total</b>	<b>12,250</b>	<b>12,944</b>
<b>Cleanups — Indian Country</b>	<b>30</b>	<b>49</b>
<b>Significant Operational Compliance Rate</b>	<b>65%</b>	<b>66.4%</b>
<b>New Reported Releases</b>	<b>&lt;9,000</b>	<b>7,168</b>

\*Government Performance Results Act of 1993

In FY 2009, the UST prevention and cleanup programs received more than \$100 million to prevent, detect, and clean up releases from federally-regulated USTs. In addition, the American Recovery and Reinvestment Act of 2009 provided another \$200 million to assess and clean up UST leaks. Almost 90 percent of money is provided directly to states, territories, and tribes to implement their prevention and cleanup programs.

# Advances In Preventing Releases

Since the beginning of the UST program, preventing petroleum releases into the environment has been one of the primary goals of the program. EPA and our partners have made major progress in reducing the number of new releases, but thousands of new releases are still discovered each year. The lack of proper operation and maintenance of UST systems is a main cause of these new releases. EPA is working with states, territories, tribes, and other partners to advance prevention efforts and quickly detect leaks when they occur.

In recent years, these efforts have been enhanced by the release prevention requirements mandated in the Energy Policy Act of 2005. To address these mandates, EPA produced several grant guidelines to help states carry out the requirements. Some states already have regulations in place that meet the requirements; other states are working to implement the provisions in the upcoming years. EPA continues to work with states and tribes to prevent UST releases and meet the mandates initiated with the Energy Policy Act.

## UST Universe End Of FY 2009

<b>States</b>	Active Tanks:	608,823
	Closed Tanks:	1,713,171
<b>Indian Country</b>	Active Tanks:	2,626
	Closed Tanks:	5,662

## Preventing Releases In Indian Country

Tribes and EPA worked to improve UST compliance in Indian country in FY 2009 by enhancing inspection efforts, developing additional compliance-focused assistance agreements with tribes, and providing training to tribal environmental professionals and facility owners and operators.

Designating tribal inspectors as authorized representatives of EPA to inspect USTs can help increase the geographic coverage and frequency of inspections in Indian country. As of the end of FY 2009, a total of five inspectors in four tribes have federal credentials to conduct UST inspections. The four tribes with federally-credentialed inspectors are: Confederated Salish and Kootenai Tribes; Eastern Band of the Cherokee Indians; Navajo Nation; and Shoshone-Bannock Tribes.

In addition, the third annual national Tribal/EPA meeting, held in Florida in October 2009, helped identify tribal issues, build collaboration, and work toward continued partnerships and improvements in the UST program in Indian country.

**In FY 2009, EPA provided \$2.6 million for the UST prevention program in Indian country.**

**EPA also provided \$35.9 million to states and territories for UST prevention activities.**

## Working To Increase 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 2009:

- ✓ The **national SOC rate** was **66.4 percent**, above our target rate, but still allowing room for continued improvement.
- ✓ The **SOC rate in Indian country** was **59 percent**, which is progress over last year; but much work remains to catch up with the national average.



*Inspecting a sump*

## Reducing Confirmed Releases

In FY 2009, 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 2009 goal to reduce confirmed tank releases to fewer than 9,000. There's been a steady reduction in underground storage tank confirmed releases, from almost 67,000 in FY 1990 to 7,168 in FY 2009.

## August 2009 Marked Four Years Of Progress Implementing The Energy Policy Act

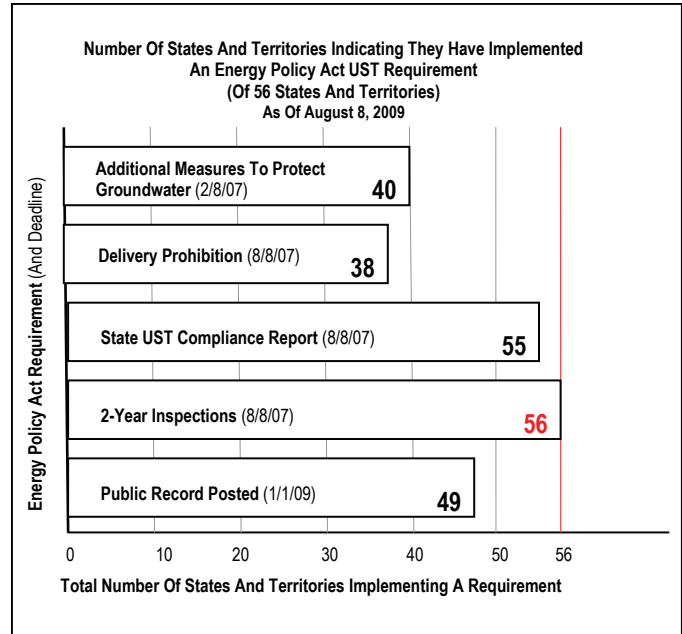
When Congress passed the Energy Policy Act on August 8, 2005, EPA, state, territorial, and tribal underground storage tank programs were presented with a mandate that focused on reducing UST releases and required numerous changes to tank programs. In addition, August 2009 was an important Energy Policy Act deadline: the requirement to develop state-specific operator training regulations.

Over four years, EPA, states, territories, and tribes have shown tremendous dedication and made significant progress toward meeting the Act's requirements and strengthening UST release prevention programs. EPA and tribes, too, made strides in working together to address tribal-related mandates in the Energy Policy Act.

- ✓ All states have grant agreements in place to implement Energy Policy Act provisions.
- ✓ Most states met these major requirements – additional measures to protect groundwater, delivery prohibition, state UST compliance report, initial two-year inspections, and public record posted.
- ✓ 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 four years is impressive, state, territorial, and tribal UST programs are faced with a great deal of ongoing work necessary to implement the prevention requirements. The inspection requirement is a good example of this. States and territories did much to meet the initial two-year August 2007 inspection requirement, but have a large task ahead to meet the three-year cycle of inspecting all 223,000 active UST facilities by August 2010. And the three-year inspection cycle will continue into the future. The operator training requirement is another example. By August 2012, states need to ensure operators are trained in accordance with the newly-established standards. EPA and tribes also have many tasks ahead as we continue implementing the tribal strategy's objectives and work to further the goals of the UST program in Indian country. Over the coming years, EPA and tribes will continue our ongoing work to increase compliance and cleanup rates in Indian country.

State, territorial, and tribal UST programs, working with EPA's regional UST programs, are poised to take on the remaining prevention implementation challenges. We will work together and continue making strides to keep our land and groundwater safe from underground storage tank releases.



## National Assistance Agreement To Help Tribes

In April 2009, EPA awarded a national assistance agreement to the Inter Tribal Council of Arizona, Inc. (ITCA) for UST compliance assistance and training support in Indian country. Under the five-year agreement, which is in place through March 2014, ITCA will provide:

- ✓ Targeted UST compliance assistance for owners and operators of UST facilities in Indian country;
- ✓ Basic UST compliance training for tribal personnel;
- ✓ Tribal UST compliance inspector training; and
- ✓ Tribal working group meetings to collaborate with tribes.

EPA is enthusiastic about the support these efforts will provide in improving UST facility compliance throughout Indian country. For more information, contact Roland Chester of ITCA at 602-258-4822.



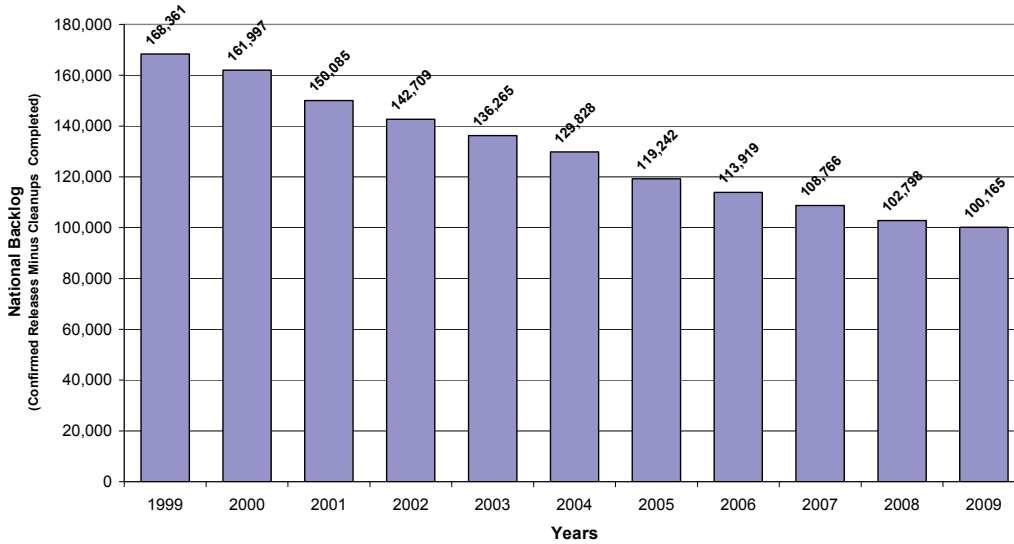
Navajo Nation ITCA training

# Advances In Cleaning Up Releases

Over the past quarter century, the UST program has made 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 2009, EPA and its state, territorial, and tribal partners continued to make progress in cleaning up petroleum releases by initiating 8,198 cleanups and completing 12,944 cleanups, of which 49 cleanups were completed 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 168,361 sites a decade ago to 100,165 sites as reported at the end of FY 2009.

**UST National Backlog:  
FY 1999 Thru End-Of-Year FY 2009**



*Cleaning up a release at an underground storage tank site*

## Continuing Cleanup Progress In Indian Country

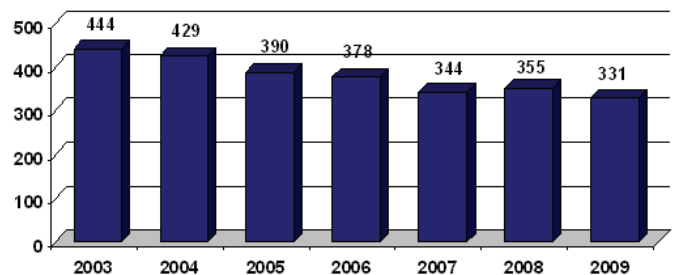
EPA has primary responsibility for implementing the LUST program in Indian country and actively works with tribes to identify, assess, and clean up UST releases. In FY 2009, EPA exceeded its annual goal of 30 cleanups by completing 49 in Indian country. Over the past seven years, the LUST cleanup backlog in Indian country has declined by about 25 percent. This success is due partly to focused efforts by EPA and tribes to complete the remaining cleanups necessary at older sites and to the increased use of the Indian country cleanup contracts. For nearly a decade, these contracts have been supported by the LUST Trust Fund and maintained by EPA for cleanup activities in Indian country.

Additionally, in FY 2009 EPA provided LUST funds directly to the Navajo Nation and the Nez Perce Tribe to conduct cleanups. This direct funding furthered their capability to develop and manage their cleanup programs and reduce the number of remaining cleanups in Indian country.

**In FY 2009, EPA provided \$9 million for LUST cleanups in Indian country, of which \$6.3 million was LUST Recovery Act money.**

**EPA also provided \$252.9 million to states and territories for LUST cleanups, of which \$190.7 million was LUST Recovery Act money.**

**LUST Cleanup Backlog In Indian Country**



## National Support On Technology Issues

### Petroleum Vapor Intrusion

One of the UST program's technical challenges is how to address petroleum vapor intrusion (PVI) at LUST sites. Beginning in September 2009, EPA hosted a workgroup, comprised of state, federal, and industry members, to assess the state of the science associated with PVI and draft an action plan which will assist state programs as they pursue efficient, protective cleanups. EPA plans to develop PVI guidance and make it available to states no later than 2012. Between now and 2012, EPA will develop and distribute interim PVI updates to help states address this issue.

### Green Remediation

With the publication of EPA's *Principles for Greener Cleanups* and *Superfund Green Remediation Strategy*, the concept of green remediation has emerged as an EPA priority. EPA's UST program supports greener cleanups and seeks to inspire protective cleanups that impose a smaller environmental footprint. EPA's UST program is considering the best way to help state, territorial, and tank programs make cleanups greener. Towards this end, the program is:

- ✓ Partnering with states to identify opportunities within LUST programs and at LUST sites for greener cleanup;
- ✓ Working with Agency colleagues to provide input into the ASTM International's (formerly American Society for Testing and Materials) *Standard Guide for Green and Sustainable Site Assessment and Cleanup*; and
- ✓ Participating in cross-Agency workgroups to develop measures and promote greener cleanups.



Best management practices of green remediation balance core elements of a cleanup project

## EPA's Petroleum Brownfields Action Plan: One Year Later

In October 2008, EPA published its *Petroleum Brownfields Action Plan: Promoting Revitalization And Sustainability* and has been implementing the plan throughout FY 2009. The action plan listed four initiatives that are guiding EPA as the Agency stepped up its efforts to foster cleaning up and reusing petroleum-contaminated brownfield sites. EPA has accomplished a great deal since issuing the action plan one year ago. During the last year, EPA:

- ✓ Updated and expanded its petroleum brownfields Web site at [www.epa.gov/oust/petroleumbrownfields](http://www.epa.gov/oust/petroleumbrownfields);
- ✓ Published two new resources for brownfields practitioners: *Petroleum Brownfields: Selecting A Reuse Option* and *Petroleum Brownfields: Developing Inventories*;
- ✓ Developed a fact sheet on petroleum sites and Brownfields grants for tribes;
- ✓ Coordinated with Smart Growth America to provide information on petroleum brownfields to community and other stakeholders at workshops and meetings;
- ✓ Promoted targeted geographic support, known as the corridor approach, to redeveloping several petroleum brownfield sites in a defined area;
- ✓ Began working with the U.S. Departments of Transportation and Housing and Urban Development to identify and coordinate on cross-agency redevelopment projects;
- ✓ Initiated a study of public policies related to petroleum brownfields revitalization;
- ✓ Began participation in a project in Bedford-Stuyvesant, New York City, to demonstrate how to integrate smart growth, green building, and other sustainability concepts into neighborhood revitalization;
- ✓ Selected an Oregon site as an EPA sustainability pilot and delivered technical assistance in sustainably redeveloping a former gas station into a community center; and
- ✓ Joined an effort with U.S. Department of Energy to promote using petroleum-contaminated land for renewable energy projects and the location of infrastructure for future fuels.



Abandoned gas stations are scattered along highways and in neighborhoods

### Cleanup Backlog Study Update

EPA made significant progress analyzing the backlog of selected states and plans to issue in autumn 2010 its cleanup backlog study, which will: help articulate challenges to state cleanup progress, focus future efforts, and identify national and state-specific strategies for completing cleanups.

## American Recovery And Reinvestment Act Of 2009 Provides EPA With \$200 Million To Clean Up Underground Storage Tank Releases

In February 2009, Congress passed the American Recovery and Reinvestment Act of 2009 which provided a supplemental appropriation of \$200 million from the LUST Trust Fund to EPA's Office of Underground Storage Tanks for cleaning up releases of contamination from federally-regulated USTs. EPA received a total of over \$7 billion, with \$900 million going to waste programs — \$200 million of which is to clean up tank releases. EPA is using the LUST Recovery Act money for assessing and cleaning up contaminated LUST sites, creating and retaining jobs as well as providing economic and environmental benefits. EPA provided \$190.7 million to state and territorial UST programs through assistance agreements, all of which were awarded by September 2009. EPA's regional UST programs are distributing and managing \$6.3 million to clean up eligible tank releases in Indian country. The remaining \$3 million is being used by EPA regions and headquarters for federal management and oversight purposes.



LUST Recovery Act money is helping clean up this Indian country site in Idaho

EPA worked closely with states, territories, and tribes in spring 2009 to develop a program that would focus on spending the LUST money to provide both environmental and economic benefits at release sites nationwide. With significant input and support from stakeholders, EPA issued a June 2009 guidance on implementing the LUST provision of the Recovery Act; see [www.epa.gov/oust/eparecovery/lustproguide.htm](http://www.epa.gov/oust/eparecovery/lustproguide.htm). More recently, EPA issued supplemental guidances on issues such as recipient reporting, applicability of Davis Bacon Act, and lessons learned about recipient and LUST performance measures reporting — all of which are also available on EPA's Web site above.

States and territories made significant progress in assessing and cleaning up LUST releases despite the fact that some received money quite late in the fiscal year. The chart on the right demonstrates the national UST program's accomplishments and performance using LUST Recovery Act money through September 30, 2009.

LUST Recovery Act Performance Measure	National Results For FY 2009
Site assessments initiated	180
Site assessments completed	34
Site cleanups initiated	57
Site cleanups completed	9

*LUST Recovery Act money has also contributed to ongoing assessments and cleanups which did not begin as Recovery Act projects and are not represented in the table above*

Many UST partners have been involved in implementing the LUST provision of the American Recovery and Reinvestment Act. Those partners have completed much in a very short time, often under very tight deadlines. Congratulations to those of you who've worked on LUST Recovery Act issues for all you've accomplished so far. EPA appreciates your herculean efforts to meet the numerous deadlines and requirements associated with the LUST Recovery Act money.

### \$200 Million Recovery Act Money For Cleaning Up Tank Releases

See [www.epa.gov/oust/eparecovery](http://www.epa.gov/oust/eparecovery) for information about how EPA, states, and territories are using Recovery Act money to assess and clean up underground storage tank petroleum leaks.



Going forward, EPA and our UST partners still have a great deal of work to continue implementing the LUST Recovery Act. States and territories will continue to assess and clean up underground storage tank releases using LUST Recovery Act money. EPA regional UST programs will continue making progress in assessing and cleaning up UST leaks in Indian country. Each quarter, recipients will report on their accomplishments.

While this money is providing environmental benefits to our country by cleaning up underground storage tank leaks, it is also helping to retain jobs and improve our nation's economy.

# Looking Ahead

FY 2009 was a year of advancement and achievement. UST partners made excellent progress and met our goals, made significant progress in advancing prevention and cleanup efforts, and made great strides in developing a program to implement the LUST provision in the American Recovery and Reinvestment Act of 2009.

Challenges remain, though, as there is still much work to be done to prevent releases and to clean up contaminated sites. In 2010 and upcoming years, EPA will focus on the traditional goals of the program — preventing and cleaning up releases — by:

- ✓ Continuing to work with states to meet the mandates and deadlines of the Energy Policy Act of 2005;
- ✓ Implementing the LUST provision of the Recovery Act of 2009, providing support to states, territories, and tribes;
- ✓ Working with tribes to continue implementing the tribal strategy;
- ✓ Ensuring that each UST facility in the country is inspected once every three years;
- ✓ Exploring better ways to identify compliance and cleanup challenges and to pinpoint solutions;
- ✓ Developing strategies to help revitalize communities and clean up abandoned gas station sites;
- ✓ Ensuring adequate funding is available for cleanups;
- ✓ Providing site support on technical issues, such as identifying fuel constituents and evaluating exposure pathways;
- ✓ Addressing technical and regulatory issues involved with alternative fuels; and
- ✓ Continuing the process to update our regulations.

EPA looks forward to increasing collaboration and working with state, territorial, tribal, and other UST partners to achieve further progress in the tanks program in order to better protect human health and the environment from petroleum releases.

## Addressing Alternative Fuels

EPA finalized the Renewable Fuel Standard rulemaking (RFS2) in early 2010. The RFS2 rulemaking implements a program that requires 36 billion gallons per year of biofuels be used by 2022. In order to adapt to the increased storage of fuels such as ethanol and biodiesel in USTs, EPA is working with our partners to gain a better understanding of: UST system materials compatibility; functionality of leak detection; and the fate, transport, and remediation issues associated with biofuel releases.

U.S. Department of Energy (DOE) laboratories are performing a compatibility study of retail fuel system materials with mid-level ethanol blends. EPA is working with DOE to include UST materials for immersion testing, as well as piping and submersible pumps for performance testing.

EPA's Environmental Technology Verification (ETV) program is developing a test plan to assess the functionality of leak detection equipment used in conjunction with underground storage tanks containing biofuels. Under the ETV program, a technical detection protocols panel and a vendor panel will assist EPA by reviewing current leak detection protocols and proposing modifications to account for ethanol- and biodiesel-blended fuels. Vendors are then expected to submit their products for evaluation under ETV's test plan.

EPA continues its work to understand the fate and transport of biofuel blends when released to the subsurface. In 2009, EPA labs continued their microcosm studies of biodiesel degradation rates and methane generation at ethanol spill sites. In 2009, EPA published a paper on the composition and behavior of fuel ethanol which further serves as an important tool for state and local UST regulators, and will help EPA refine models to characterize contamination plumes.

See EPA's biofuels compendium [www.epa.gov/oust/altfuels/bfcompend.htm](http://www.epa.gov/oust/altfuels/bfcompend.htm) for information about storing ethanol and biodiesel fuels.

## Developing Regulations

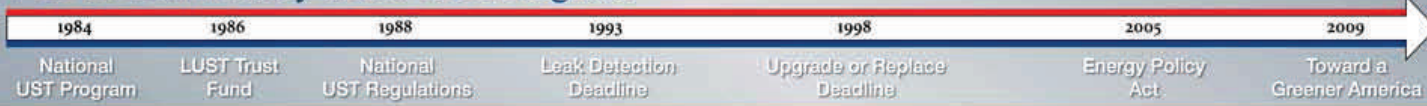
EPA is revising the 1988 federal underground storage tank regulations to require that the 2005 Energy Policy Act provisions apply to USTs in Indian country and in states that do not have state program approval. The Agency is also considering revisions to the existing requirements, such as improving operation and maintenance, enhancing the effectiveness of leak detection, and removing deferrals on some tanks.

EPA is working closely with states, tribes, industry, and other stakeholders regarding our rulemaking plans and efforts. We aim to issue a proposed rule in autumn 2010, followed by a final regulation that will carry the UST program into the future.



Most of the fuel supply in the U.S. contains ethanol

## 25th Anniversary of the UST Program



November 8, 1984

[www.epa.gov/oust/25anniv.htm](http://www.epa.gov/oust/25anniv.htm)

November 8, 2009

March 2010

### A Letter To UST Stakeholders

From Carolyn Hoskinson, Director, EPA's Office of Underground Storage Tanks

The ending of one year and beginning of another is the perfect time to reflect a bit — and thinking back on all that's gone on in the UST program during 2009 feels like much more than a year's worth of activities. In February 2009, the American Reinvestment and Recovery Act was passed, providing authority and money to assess and clean up underground storage tank leaks in states, territories, and Indian country. August 2009 marked the 4<sup>th</sup> anniversary of the Energy Policy Act; November 2009 was the UST program's 25<sup>th</sup> anniversary. Through all of this, I was heartened to see our many UST partners working closely and cooperatively with us to achieve so much and embrace these important milestones.

We've accomplished much together — EPA and our UST partners have closed over 1.7 million substandard tanks; cleaned up more than 388,000 petroleum leaks; and reduced the number of new releases from a high of almost 67,000 in 1990 to just over 7,100 in 2009. Today, tank systems are much less likely to leak and cause significant environmental problems. We've set in place a program that focuses on spending LUST Recovery Act money in ways that provide both environmental and economic benefits at UST release sites nationwide.

Yet amidst all these accomplishments, many challenges still remain for the national UST program. All remaining 611,500 active, federally-regulated tanks must be inspected every three years. All tank operators must be trained in accordance with newly-established standards. The backlog of just over 100,000 releases needs to be addressed. We must continue to ensure, in an accountable and transparent manner, that the \$200 million LUST Recovery Act money to assess and clean up petroleum underground storage tank leaks is used expeditiously to clean up releases, create jobs, and stimulate the economy.

Thank you to all our UST partners for your efforts to protect our environment and human health from underground storage tank releases. Your work and dedication made 2009 a remarkable year. I look forward to working with you over the next year and wish you the best for 2010.

EPA-510-R-10-001, March 2010  
U.S. Environmental Protection Agency  
Office of Solid Waste and Emergency Response  
Office of Underground Storage Tanks

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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. The FY 2009 end of year activity report is available at [www.epa.gov/oust/cat/camarchv.htm](http://www.epa.gov/oust/cat/camarchv.htm).