



IEPA/BOL/02-007

2001 Annual Report

Leaking Underground Storage Tank Program

Welcome

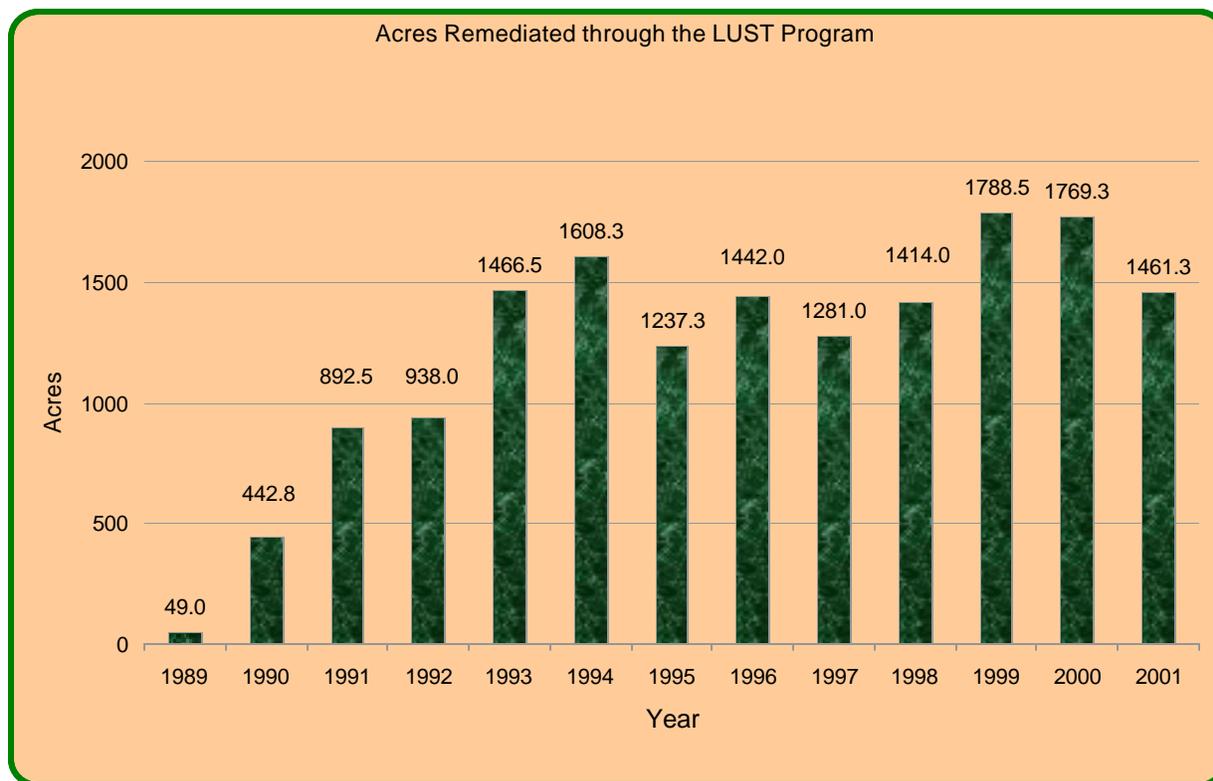
The Year 2001 presented Illinois EPA with one of its greatest achievements in the Leaking Underground Storage Tank (LUST) Program: more LUST incidents were closed than reported. With reimbursement for corrective action activities continuing to increase, we expect the trend to continue, allowing the Illinois EPA to reduce the 10,000-plus backlog of LUST sites. Indeed, during the year 2001, \$56.8 million were reimbursed to tank owners.

Two significant bills affecting the LUST Program were also signed into law by Governor George H. Ryan last year. The extension of the Environmental Impact Fee will secure funding for LUST cleanups until 2013, and the MTBE Elimination Act will prohibit the use of MTBE as a gasoline additive.

Illinois EPA, through its LUST Section, continues to actively promote and encourage the redevelopment of petroleum-impacted brownfields sites. Illinois was 1 of only 10 states nationwide to receive an USTfields pilot grant from the U.S. EPA, which will be used to redevelop a formerly abandoned gas station into affordable housing. Due to the success of that project, we have applied for additional grants for USTfields revitalization in other communities.

Illinois EPA continues to provide information on our web site about every reported LUST release in Illinois along with LUST Program publications, forms, regulations and other related information. I invite you to visit our web site and to use the valuable resources the Illinois EPA provides.

Renee Cipriano,
Director, Illinois EPA



The LUST Section measures its progress and effectiveness by calculating acres remediated.

The Leaking Underground Storage Tank Program 2001 Annual Report is produced by the Illinois Environmental Protection Agency, Renee Cipriano, Director.

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Year 2001 Highlights

The LUST Program continues to strive towards improving and streamlining the regulatory process to ensure that LUST sites are remediated and reimbursed in a more cost-effective and timely manner. The LUST Program is proud of these improvements and recognizes some of last year's more significant accomplishments:

- This is the first year since the inception of the LUST Program in 1984 where more LUST incidents were closed than reported. This milestone can be attributed not only to the passing of the 1998 tank upgrade requirements, which resulted in the removal of thousands of tanks from 1998 to 2000, but also to the consistent issuance of No Further Remediation (NFR) letters. There will still be releases that occur due to equipment failures, accidents and the discovery of orphaned or abandoned tanks. However, this downward trend in incidents reported is expected to continue, allowing the Illinois EPA the opportunity to reduce the 10,000-plus site backlog.
- The Illinois EPA supported the successful extension of the Environmental Impact Fee, which was signed into law by Governor George H. Ryan in August 2001. This law secures the funding to reimburse tank owners and operators until 2013. This extension equates to an estimated \$500 million over 10 years.
- The LUST Program continues to encourage the redevelopment of petroleum-impacted brownfields sites. In September 2001, the LUST Section was active at the National Brownfields Conference held in Chicago. In addition, Illinois was 1 of only 10 states nationwide to receive an USTfields pilot grant (see page 4 of this report) from the U.S. Environmental Protection Agency (U.S. EPA), which will culminate in the building of affordable housing on a formerly abandoned gas station site in Chicago. After this successful experience, the LUST Section submitted grant applications for three more USTfields pilots in Illinois. The LUST Section looks forward to additional successful USTfields projects in 2002.
- The MTBE Elimination Act was signed into law in 2001 prohibiting the use of methyl tertiary-butyl ether (MTBE) as a gasoline additive within three years. MTBE is a volatile organic compound that has been used in gasoline since the late 1970s as an octane enhancer and to meet Clean Air Act requirements. Unfortunately, this compound is a contaminant that is being discovered at increasing levels in both surface and groundwater sources. The Illinois EPA has proposed the addition of MTBE as an indicator contaminant for gasoline releases in the LUST regulatory amendments pending before the Illinois Pollution Control Board (IPCB). Remediation objectives for MTBE were adopted in the 35 Illinois Administrative Code Part 742 regulations in 2001.
- The number of LUST sites and the amount of funds reimbursed to owners and operators has continued to increase with a total of \$56.8 million reimbursed at 1,490 sites in 2001. Since 1989, owners and operators have been reimbursed \$442.8 million from the Underground Storage Tank (UST) Fund.
- A total of 1,461 acres of land have been cleaned up in the past year, with 15,790 acres remediated since 1989. Our goal is to remediate 22,500 acres by 2005.

USTfields Pilot Proposals for Illinois

The U.S. EPA Office of Underground Storage Tanks has undertaken the “USTfields Initiative” to address petroleum contamination from abandoned USTs generally excluded from U.S. EPA’s redevelopment efforts. The USTfields pilot projects, funded under the USTfields Initiative, are expected to demonstrate how to better use limited resources to assess and clean up petroleum-impacted brownfields sites. In December 2001, Congress approved a Superfund reform bill, the Small Business Liability Relief and Brownfields Revitalization Act, which will provide liability protection for land owners and increase funding for state and local programs that assess and clean up brownfields. Increased funding means more resources will be available for the assessment and cleanup of USTfields.

Phase I of the USTfields pilots involved awarding 10 grants up to \$100,000 each. The Illinois EPA received one of these grants to be used in the City of Chicago. The project site, 2759 West Washington Street, is the city’s highest priority for cleanup and redevelopment. From the 1960s through the mid-1990s, a gas station and auto repair shop were operated on the property. As part of the city’s Abandoned Service Station Management Program, the city took possession of the property, removed eight USTs and demolished a 12,000-square-foot building. The city did not have the funding to complete remediation. With the USTfields pilot grant, an Illinois EPA-approved contractor, under Illinois EPA oversight, performed soil remediation and additional UST removal at the site between July 30 and August 6, 2001. The Illinois EPA will issue an NFR Letter in 2002. The city plans to redevelop the property for affordable housing upon completion of remediation. This project was showcased at the National Brownfields Conference on September 24-26, 2001, in Chicago.

The next round of 40 USTfields pilots, each of which is eligible to receive a maximum of \$100,000, is expected to be announced in 2002. In November 2001, each state was allowed to submit three proposals for the pilot projects. The state provides the services to the municipality for the pilot. In administering the grant, the state oversees the project and hires a contractor to perform the remediation work.

Illinois submitted three proposals: City of Freeport, City of Waukegan and Village of Arthur. Waukegan and Arthur both involved single abandoned UST sites, while the Freeport proposal included two adjacent UST sites in the middle of the proposed Jane Addams Trail. The LUST Section worked with the Illinois EPA’s Office of Brownfields Assistance in selecting the pilot sites and in preparing the applications.



Many USTfields sites are abandoned gas stations.

MTBE

What is MTBE?

Methyl tertiary-butyl ether is a volatile organic compound that has been used since the late 1970s as an octane enhancer and to promote more complete burning of gasoline, thereby reducing carbon monoxide and ozone levels. MTBE, when used as an oxygenate, usually makes up 10 to 15 percent of gasoline by volume. Although beneficial for improving air quality, if MTBE reaches groundwater, the contaminant spreads quickly and is very difficult to remediate.

MTBE Concerns in Illinois

Unfortunately, this compound is being discovered at increasing levels in both surface and groundwater throughout the country. In Illinois, several communities have identified the presence of this contaminant in their community water supplies, resulting in the discontinued use of some of these wells. MTBE is used almost exclusively in gasoline. The highest potential source of this groundwater contaminant is from LUST sites. Furthermore, voluntary sampling by several major oil companies has revealed the presence of MTBE at LUST sites throughout the state. Although legislation has been signed into law that will eliminate MTBE as an additive in gasoline in the future, there have already been releases of this compound into the environment that must be addressed.

LUST Program's Response

Many states and the federal government either have established or are developing standards for MTBE in groundwater. MTBE will become an indicator contaminant for all releases of gasoline reported on or after the effective date of the amendments pending before the IPCB. Additionally, provisions for existing sites that voluntarily wish to address MTBE contamination are included in the amendments, which are expected to be adopted in 2002. Remediation objectives for soil (the most stringent being 320 ug/kg) and groundwater (70 ug/L) have already been adopted in Illinois.



Tank removal is often the first step in the cleanup of an underground tank release.

Statutory and Regulatory Authority

Timeline

- 1984** Subtitle I of the federal Resource Conservation and Recovery Act established a regulatory program for USTs.
- 1986** Subtitle I amendments established a federally-funded UST Program to address petroleum releases from USTs.
- 1987** Illinois General Assembly enacted a law that established a state UST Program to meet the objectives of the federal UST Program.
- 1989** Illinois UST Fund was created to satisfy financial assurance requirements.
- 1989** Title 35, Illinois Administrative Code Part 731, Underground Storage Tanks regulations were adopted by the IPCB.
- 1993** Title XVI of the Environmental Protection Act was signed into law.
- 1994** Title 35, Illinois Administrative Code Part 732, Petroleum Underground Storage Tanks regulations were adopted by the IPCB.
- 1997** Title 35, Illinois Administrative Code Part 742, Tiered Approach to Corrective Action Objectives regulations were adopted by the IPCB.



Part 732 Most Significant Proposed Amendments

- Adoption of MTBE as an indicator contaminant
- Adoption of “best efforts” determination to obtain off-site access
- Inclusion of sampling criteria during Early Action

The proposed amendments are expected to be adopted in 2002. For more information about the proposed amendments or to obtain a copy of the amendments, visit the IPCB’s web site at:

www.ipcb.state.il.us

Tiered Approach to Corrective Action Objectives (TACO)

The primary goal of remediation is to manage contamination to prevent harm to human health and the environment. The TACO regulations in 35 Illinois Administrative Code Part 742 provide more flexibility to tank owners and operators in the development of remediation objectives by allowing the use of a risk-based, site-specific approach. These remediation objectives protect human health while taking into account site conditions and land use scenarios. It is now the tank owners and operators, with the property owner's concurrence, who decide how best to manage their sites within TACO guidelines, subject to Illinois EPA review and approval. By exercising these choices, tank owners and operators may reduce remediation costs, return more sites to productive use, and hasten property redevelopment, while still remaining in full compliance with environmental laws and regulations.

For more information about TACO, visit the Illinois EPA's TACO web page at:

www.epa.state.il.us/land/taco/index.html

Part 742 Most Significant Amendments

- Establishment of MTBE remediation objectives
- Adoption of Environmental Land Use Controls (ELUCs)
- Revision of arsenic background level
- Revision of remediation objectives for many contaminants
- Expansion of pH-specific soil remediation objective tables

For more information about the most recent amendments or to obtain a copy of the amendments, visit the IPCB's web site at:

www.ipcb.state.il.us

UST Fund

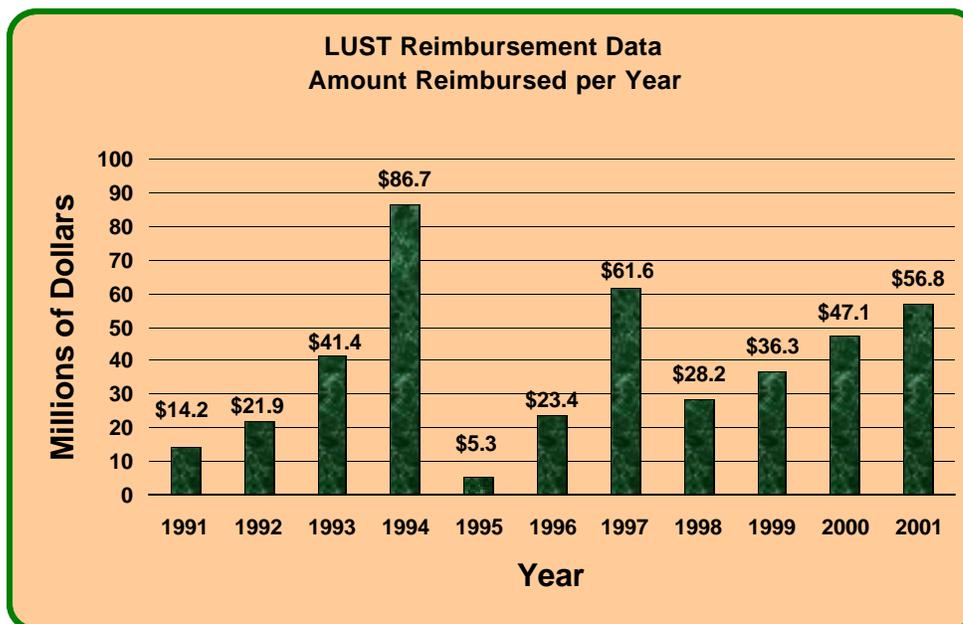
Federal regulations require petroleum UST owners and operators to demonstrate the financial ability to remediate tank releases and to pay for damages to third parties. Federal UST regulations allow, but do not require, states to establish publicly financed UST funds. Illinois chose to set up such a fund to help tank owners and operators pay for cleaning up leaks from petroleum USTs and to meet their financial assurance requirements.

Since its inception in 1989 through 2001, the UST Fund has reimbursed 13,537 claims for a total of \$442.8 million. Illinois generates money for the UST Fund through a \$.003 per gallon motor fuel tax and an \$.008 per gallon environmental impact fee, both of which are due to expire in 2013.

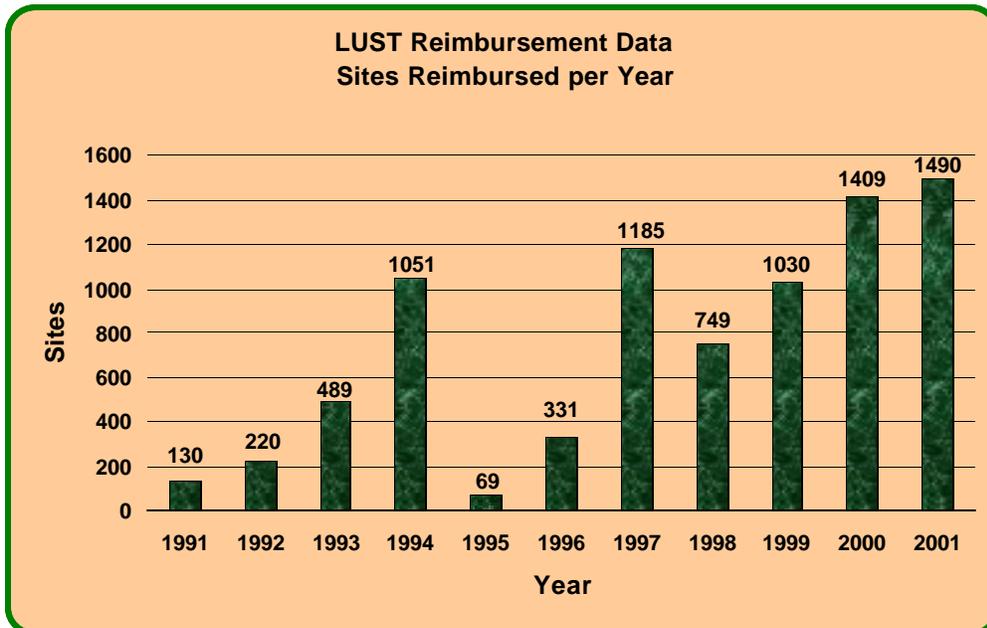
The LUST Claims Unit reviews billing packages submitted by eligible tank owners and operators seeking reimbursement from the UST Fund to determine if the costs are:

1. For materials or services associated with corrective action activities; and
2. Reasonable and are not exceeding the minimum requirements of the Environmental Protection Act and the applicable regulations.

During 2001, the Illinois EPA received 2,480 LUST reimbursement claims worth \$75.5 million. The Illinois EPA paid 2,406 claims at 1,490 sites worth \$56.8 million.

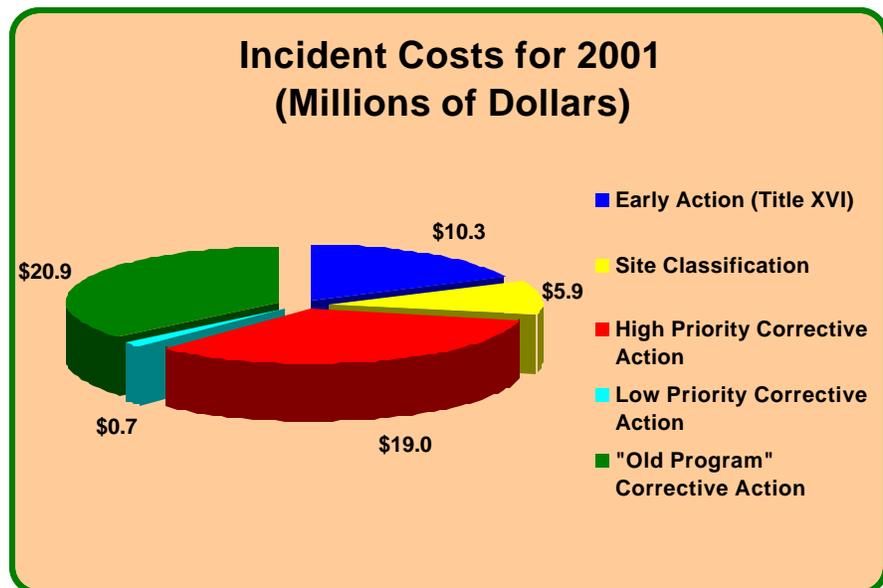


UST Fund (cont'd)

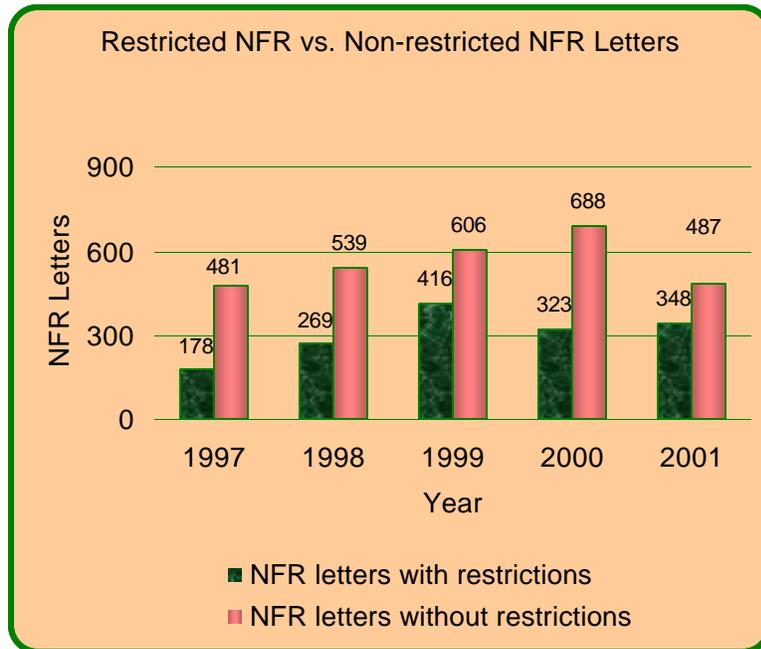


The increase in the number of sites reimbursed in 1994 and 1997 corresponds to increases in UST Fund revenues from bond sales. The rise after 1998 is in large part due to passage of the Environmental Impact Fee and full staffing of the LUST Claims Unit.

The amounts shown represent the total amount of reimbursement paid for specific category claims throughout the year. Early action costs include activities such as tank removal, sampling and further release prevention. Site classification costs include Methods One and Two and Pathway Exclusion. Low Priority costs are for a three-year groundwater monitoring period. High Priority costs range from physical remediation at a site to the use of institutional controls. "Old program" sites are not subject to Title XVI and the Part 732 regulations since they were reported prior to September 16, 1993, so claims submitted for these incidents are combined.



NFR Statistics



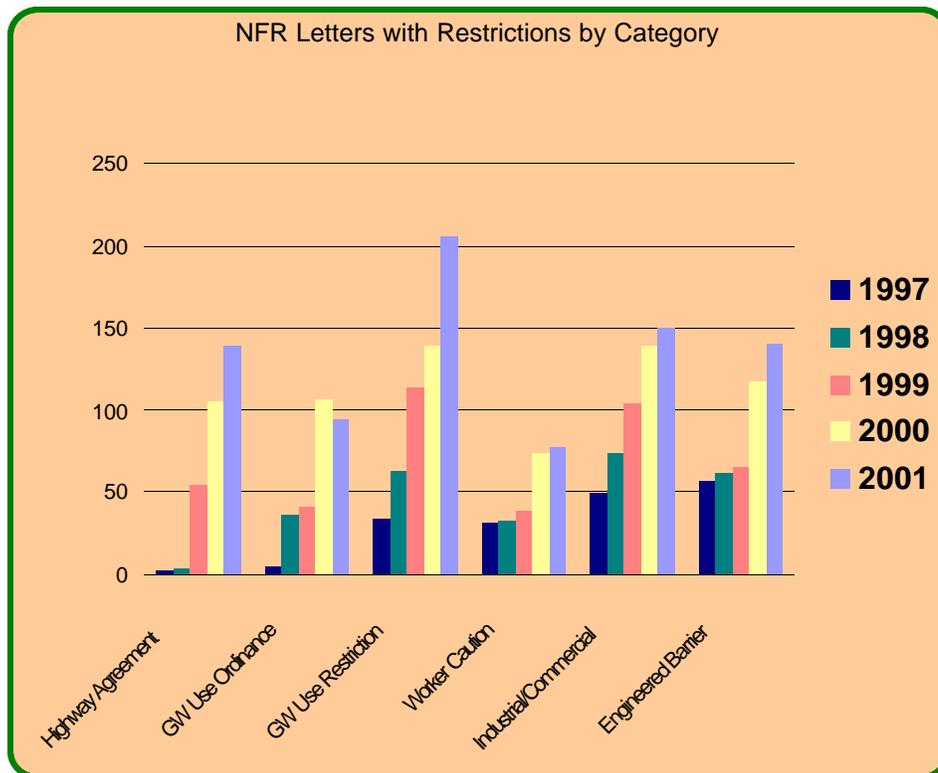
An **NFR Letter with restrictions** contains institutional controls or engineered barriers to prevent potential exposure to remaining contaminants. An institutional control is a legal mechanism for imposing land use limitations, such as through an ELUC or local ordinance.

An **NFR Letter without restrictions** contains no sitespecific restrictions (institutional controls or engineered barriers). The decision whether to impose restrictions or remove the remaining contamination is made by tank owners and operators.



In-situ treatment at a LUST site.

NFR Statistics (cont'd)



These restrictions are used to prevent potential exposure to remaining contaminants and may be used in combination.

Highway Agreement

A highway authority agreement prohibits the use of groundwater and limits access to soil contamination under a highway right-of-way.

Groundwater Use Ordinance

A groundwater use ordinance, adopted by local government, prohibits the installation and use of potable water supply wells, usually within the entire community.

Groundwater Use Restriction

A groundwater use restriction prohibits the installation and use of potable water supply wells, usually at the site. Restrictions may also include ELUCs for other properties that may have been impacted by the site release and would, therefore, prohibit groundwater use off-site in place of a local ordinance.

Worker Caution

A worker caution requires that a safety plan be implemented if any excavation and construction activities occur within the contaminated soil.

Industrial/Commercial

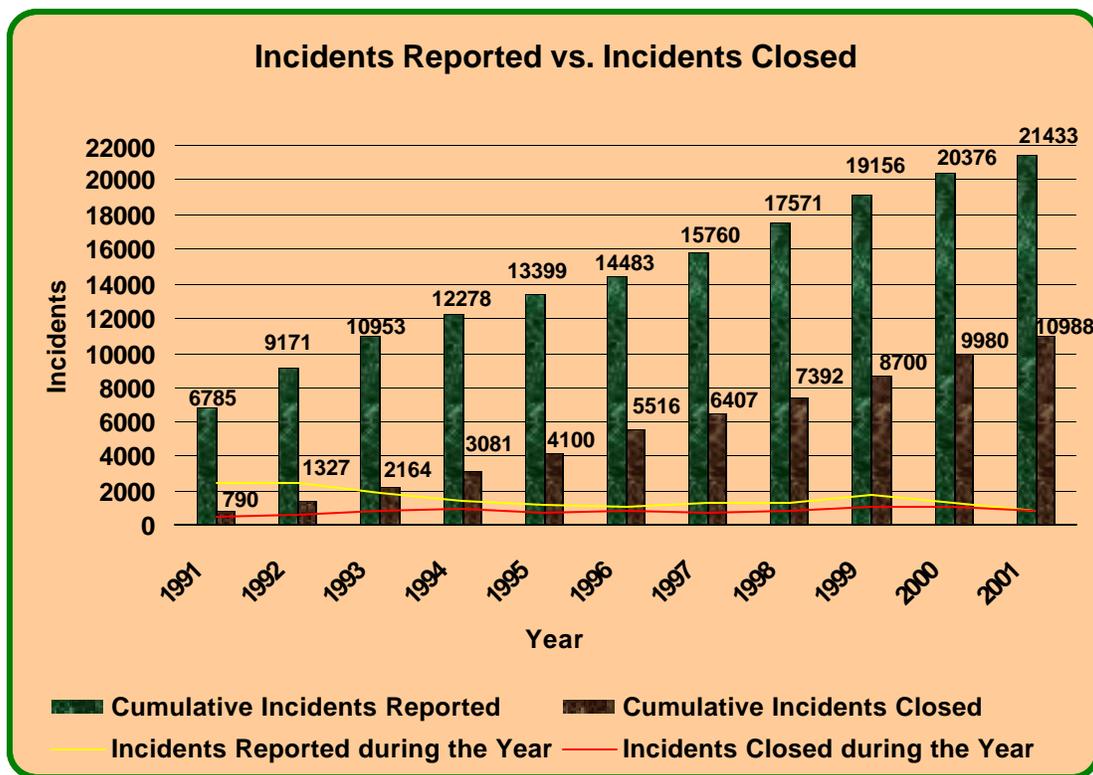
An industrial/commercial property use prohibits residential use of the site.

Engineered Barrier

Engineered barriers block the exposure pathway and may include asphalt or concrete pavement, permanent structures or other material approved by the Illinois EPA. An engineered barrier must be properly maintained to prevent exposure to remaining contamination.

Incident Statistics

There were 833 new incidents reported in 2001, down from 1,218 in 2000. One explanation for this 32 percent decrease is that the influx of incidents, caused by UST owners and operators removing their tanks in accordance with the 1998 deadline for tank upgrades, appears to be diminishing. For the first time since the inception of the LUST Program, the number of NFR letters issued for the year is greater than the number of incidents reported. This is significant in that it allows the Illinois EPA the opportunity to decrease the backlog of previously reported incidents. The cumulative total of incidents closed includes those issued NFR letters, incidents transferred to other Illinois EPA programs for remediation and incidents determined not to be regulated by the LUST Program.



LUST-regulated Substances

The LUST Section oversees and reviews remediation activities at a site for which a release of LUST-regulated substances from an UST was reported to the Illinois Emergency Management Agency (IEMA). LUST-regulated substances include petroleum and hazardous substances. Petroleum substances include gasoline (leaded and unleaded), diesel fuel, fuel oil, jet fuel and used (waste) oil, which comprise 96 percent of the total incidents reported. Hazardous substances include virgin (raw) chemicals such as benzene, methyl ethyl ketone, xylene and many others, which comprise 3 percent of the incidents reported. The remaining 1 percent is a combination of petroleum and hazardous substances.

LUST Program Web Page

Our web page can be used to search the program's database to find specific information about every LUST site in Illinois and to access various documents to understand program requirements for the successful remediation of a site. Below is the layout of the program's web page, which is regularly updated and can be located at:

www.epa.state.il.us/land/lust/index.html

Leaking Underground Storage Tanks (LUST)

About the Program

Database Search Pages

Site Technical

Publications

An Introduction to Leaking Underground Storage Tanks

Illinois Underground Storage Tank Fund Guide

Frequently Asked Questions

Brownfields Properties with Underground Storage Tanks

1998 Annual Report

1999 Annual Report

2000 Annual Report

Illinois USTfields Pilot Grant

Forms

Technical

Budget/Billing

Transfer to Site Remediation Program

Soil Boring Log

Well Completion Report

Regulations – 35 Ill. Adm. Code (Word Format) (PDF)

Part 731 – Underground Storage Tanks

Part 732 – Petroleum Underground Storage Tanks

Part 742 – Tiered Approach to Corrective Action Objectives

Office of the State Fire Marshal

U.S. EPA – Office of Underground Storage Tanks

City of Chicago – Underground and Above Ground Storage Tanks

For More Information

Other Information

Push-Driven Technology Fact Sheet

Institutional Control Model Documents

Groundwater Ordinance Status Chart

Tiered Approach to Corrective Action

Objectives (TACO)

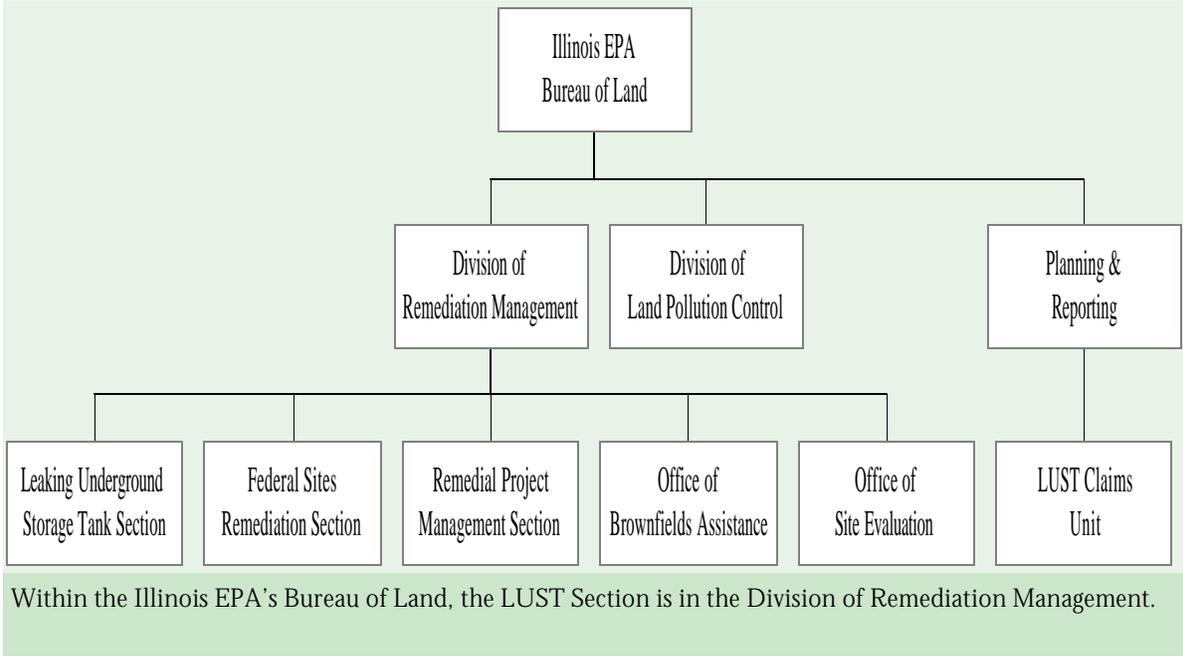
Cleanup Databases

Information Requests (FOIA)

SW-846 Method 5035 Fact Sheet

About Adobe Acrobat Reader

Organization



Relationship to Other Illinois EPA Programs

Brownfields: Through its grant and loan programs, the Office of Brownfields Assistance offers financial incentives to municipalities and private parties to clean up and redevelop abandoned properties with USTs. Technical support from the staff of Brownfields representatives, who guide potential grant and loan recipients through the brownfields cleanup and redevelopment process, is also available upon request.

Federal Facilities: The Federal Site Remediation Section addresses LUSTs that are found within its authority. Since the approach to remediation is often area wide, any site subject to 35 Illinois Administrative Code Part 731 or 732 may conduct remedial activities under the Federal Site Remediation Section provided the LUST Program requirements are satisfied.

Site Remediation: U.S. EPA has approved the use of the Site Remediation Program (or voluntary cleanup program) for LUST sites subject to federal law. Therefore, any site subject to 35 Illinois Administrative Code Part 731 or 732 may elect to conduct remedial activities under the Site Remediation Program provided the LUST Program requirements are satisfied.

UST/LUST Program

Illinois has entered into a cooperative agreement with U.S. EPA for approximately \$2 million in which Illinois EPA and the Illinois Office of the State Fire Marshal (OSFM) administer a comprehensive UST Program at the state level. Illinois EPA administers the remedial investigation and corrective action portion of the state program and reimbursements, while OSFM administers the preventative and permitting side of the program. Communication between the two agencies is crucial for effective implementation of the state program.

Illinois EPA LUST Section staff review the technical adequacy of plans, reports and associated budgets. This includes the development of the appropriate remediation objectives for each site. Once the site has met its remediation objectives and program requirements, Illinois EPA will issue an NFR letter for the LUST release. Illinois EPA staff review and process claims for reimbursement from the UST Fund (for investigation and remediation costs).

In most cases, OSFM is already involved with a site when a release is reported to the IEMA. OSFM regulates daily operation and maintenance of UST systems, including oversight for tank removal. In addition, OSFM determines an owner's or operator's eligibility to seek reimbursement from the UST Fund and the applicable deductible. OSFM may provide helpful information to the Illinois EPA when questions arise concerning suspected releases, potential threats to human health and the environment and site conditions during tank removal.

Owner and Operator Requirements

Owners and operators who report new petroleum UST releases to IEMA on or after September 13, 1993, must meet the requirements of 35 Illinois Administrative Code Part 732, Petroleum Underground Storage Tanks. Once notified of the release by IEMA, the LUST Section sends information to tank owners and operators, including program forms, to assist them in complying with the reporting requirements. By law, the Illinois EPA is required to review and approve, modify or deny all plans, reports and associated budgets (except 20 and 45 Day Reports, for which there are no deadlines for review) subject to 35 Illinois Administrative Code, Part 732 within 120 days of receipt.

The complete list of Technical and Budget/Billing forms can be found at:

www.epa.state.il.us/land/lust/forms/technical-forms/index.html



At times, tank removal includes multiple tanks.

More Information

A project manager is on call every business day to answer questions and provide information regarding:

- Reported releases
- Reviews of plans, reports and budgets
- LUST remediation
- LUST regulatory requirements
- Requests for copies of publications and forms (also available on the web site)

Illinois EPA LUST Section

1021 North Grand Avenue East
 P.O. Box 19276
 Springfield, Illinois 62794-9276
 Phone: 217-782-6762 Toll Free: 1-888-299-9533
 Fax: 217-524-4193
www.epa.state.il.us/land/lust/index.html

A project manager is on call every business day to answer questions about reimbursement and claims.

Illinois EPA LUST Claims Unit

Phone: 217-782-6762
 Fax: 217-557-1165

To obtain copies of plans, reports and correspondence on LUST sites:

Illinois EPA Freedom of Information Act Unit

1021 North Grand Avenue East
 P.O. Box 19276
 Springfield, Illinois 62794-9276
 Attn: Jan Ogden #24
 Phone: 217-782-9878
 Fax: 217-782-9290
 Email: FOIA@epa.state.il.us

To report environmental complaints:

Illinois EPA Field Operations Section

Phone: 217-785-8604
 Fax: 217-524-1991

For questions regarding:

- Tank installation, upgrade or removal
- Leak prevention or detection
- Aboveground storage tanks
- Complaints about suspected tank releases
- Financial responsibility requirements
- UST Fund eligibility and deductible

Office of the State Fire Marshal

Division of Petroleum and Chemical Safety
 1035 Stevenson Drive
 Springfield, Illinois 62703
 Phone: 217-785-5878
www.state.il.us/osfm

To report releases from an UST system:

Illinois Emergency Management Agency

Phone: 217-782-7860 Toll Free: 1-800-782-7860

To obtain copies of environmental regulations:

Illinois Pollution Control Board

Phone: 217-524-8500
www.ipcb.state.il.us

Underground storage tanks are often located near structures.



The Future

Funding is secure until 2013 due to the extension of the Environmental Impact Fee which was signed into law in August 2001. The fee extension will generate an estimated \$500 million for the UST Fund over a 10-year period. This funding is necessary to meet the anticipated demands from tank owners and operators for the reimbursement of cleanup costs at their LUST sites.

The presence of MTBE in the soil and groundwater is expected to have an impact on the cleanup of some LUST sites. However, it is anticipated that MTBE will not be the primary indicator contaminant at most sites. MTBE is difficult to remove from groundwater, which could increase the cost of cleanups, complicate remediation efforts and, therefore, extend the time it takes to bring a LUST site to closure.

The LUST Section continues to provide information to the public such as publications, forms, regulations and access to the LUST database on its web page. In addition, we are working to provide site information on a geographical information system platform for all of the 21,000-plus releases in our database system.



Although most LUST sites are redeveloped, some sites are used as green space to improve the aesthetic value of the area.