

Hazardous Waste Management Commission Report

January through March 2009

Quarterly Report



Missouri
Department of
Natural Resources

Hazardous Waste Management Commissioners

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"The goal of the Hazardous Waste Program is to protect human health and the environment from threats posed by hazardous waste."

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Missouri Department of Natural Resources

March 2009 Program Update

There were plenty of changes in the first three months of 2009: Missouri's newly elected governor, Jay Nixon, was sworn in; a new department director, Mark Templeton, was announced and confirmed; and many other additions joined our department team. Governor Nixon and Director Templeton both bring their own unique skill sets to the job, and both have proved to be interested and quick learners in the happenings of the Hazardous Waste Program.

Around mid- to late-January, the word stimulus began creeping into conversations on both the state and national levels. We anticipated the Hazardous Waste Program might be involved with some of the American Recovery and Reinvestment Act, or Recovery Act, efforts to stimulate the economy through environmental cleanup efforts. Many of our sites have already been an economic boost for communities. Look at the Brownfields 50 Hidden Treasures study – 11,053 new jobs created in just 50 Brownfields projects. That is just a small representation of the positive impacts the Hazardous Waste Program has had to the state's health – both environmentally and economically.

In this quarterly report, the Recovery Act package is mentioned in only a few places. We really didn't know many absolutes regarding Recovery Act funds in the first quarter of 2009. Future quarterly reports will continue to provide updates on the Recovery Act funds and how we are using them.

The special reports section includes information on Environmental Justice and what the Department is doing to make sure environmental laws and actions are fair and understood to all groups of people. The report also looks at steps we are taking to increase the efficiency of our program by designing a new information system, and an example from Compliance and Enforcement of how we are able to work with companies and organizations involved in enforcement cases to reach an outcome acceptable by all parties.

A continuing series of articles on the rulemaking process explains emergency rules and why and when they are options. There are some options available to the Department through the rulemaking process, and when time or safety is a primary concern, emergency rules can be used.

A phenomenon known as "grayfields" is explained. As the name suggests, these areas are associated with our Brownfields program and are older, sometimes vacant retail areas surrounded by empty, faded parking lots. Like other Brownfields sites, these areas are bursting with possibility.

While some things may change, others stay the same. As this report showcases, there was a lot going on in the first quarter of 2009, but staff in the Hazardous Waste Program remained focused on keeping Missouri and its citizens safe from threats posed by hazardous waste.

Sincerely,



Robert Geller, Director
Hazardous Waste Program

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Environmental Justice and How it Effects Missouri

EPA defines environmental justice as the “fair treatment for people of all races, cultures and incomes, regarding the development of environmental laws, regulations and policies.” Over the last decade, attention to the impact of environmental pollution on particular segments of our society has been steadily growing. Concern that minority populations and low-income populations bear a disproportionate amount of adverse health and environmental effects led to the issuance of Executive Order 12898 in 1994. This order focused federal agency attention on the following issues:

- Agency responsibilities.
- Development of agency strategies.
- Federal agency responsibilities for federal programs.
- Research, data collection and analysis.
- Subsistence consumption of fish and wildlife.
- Public participation and access to information.

EPA responded by developing the Environmental Justice Strategy, which focuses on the agency’s efforts in addressing these concerns. Part of this strategy includes grants to states to assist communities that may be considered in need due to minority or low-income populations. This quarter, EPA sent a request for proposals to the states asking for potential environmental justice projects. The Missouri Department of Natural Resources applied for this grant and it is currently working its way through the EPA grant process. The grant is worth \$160,000 over three years.

The main focal point of the Department’s submitted grant involves a defined area, the Big River Basin in southeast Missouri, where lead contamination is impacting communities. These impacts are magnified by the depressed socioeconomic situation of its citizens. The communities are at risk with lead in the air, water and soil. Funds could be used to start a project to partner with the Big River Watershed Group and give the citizens resources to help their community. This could include training, outreach and leadership so they can positively impact their community into the future as it relates to their health and overall well-being.

The Department looks forward to applying for additional opportunities that may arise in the future out of the environmental justice arena. There are many citizens in Missouri who could benefit from the financial support from these projects.

Emergency Rules

The normal state rulemaking process takes, at a minimum, one year. This time frame does not take into account actually drafting the rule language. Drafting rule language in the Department is frequently a collaborative effort generally involving stakeholders and may take a significant amount of time.

There are times when a rule needs to become effective much sooner than the normal process allows. If there is an immediate danger to the public health, or a rule is needed to protect an important government interest by a certain date that may be rapidly approaching, an emergency rule is sometimes used. Other times, as in the case of the Manufacturer Responsibility and Consumer Convenience Equipment Collection and Recovery Act, legislation includes an effective date for a rule that cannot be met using the normal rulemaking process.

In these cases, an emergency rule can be filed to satisfy the legal requirements for the rule. Even though filing an emergency rule puts a rule on the fast track to becoming effective, there are plenty of safeguards in place to make sure the rule is not unnecessary. The legal requirements for emergency rules are spelled out in Section 536.025 of the Missouri Revised Statutes.

Emergency rules must follow procedures “best calculated to assure fairness to all interested persons and parties...” and “which comply with the protections extended by the Missouri and United States Constitutions.” In other words, the rule must be fair and legal, as to be determined by the Secretary of State’s office.

The agency filing the emergency rule must make the case that an emergency rule is necessary. The details surrounding the need for an emergency rule, which could be new statutes, budget cuts or court cases, and what would happen if the emergency rule is not accepted is included in documentation to the Secretary of State and the Joint Committee of Administrative Rules, or JCAR.

These details are submitted with the emergency rule simultaneously to the Secretary of State’s office and JCAR. The rule will be published in the *Missouri Register*, according to the Secretary of State’s office, as soon as practicable.

It is now up to the Secretary of State’s office to review the submitted documents and then decide if the rule meets statutory requirements. If not, the rule won’t be published, and may have to go through the normal rulemaking process.

JCAR also reviews the rule, and any comments from the committee will also be published in the *Missouri Register*.

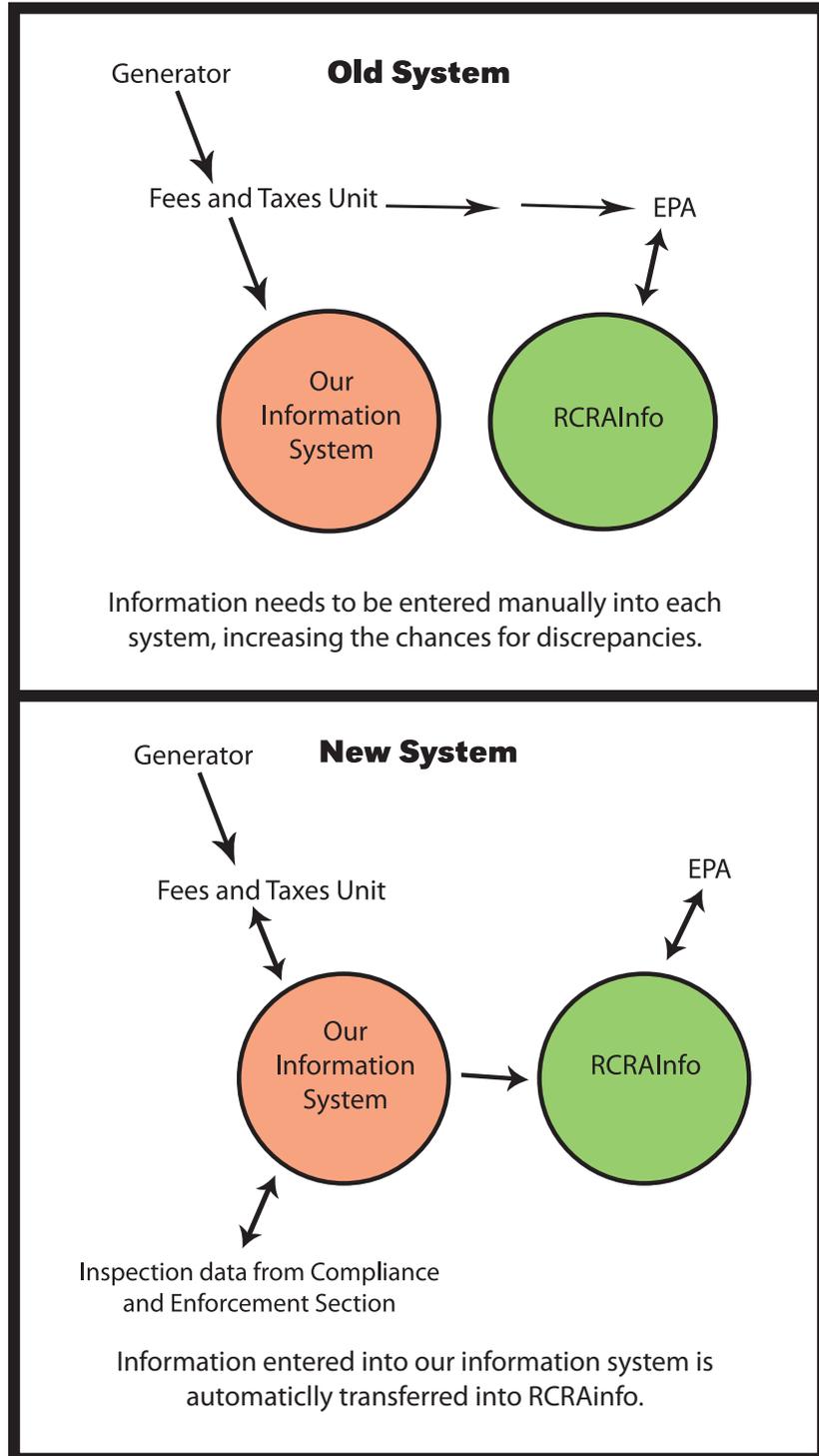
The minimum time length for an emergency rule to become effective after filing with the Secretary of State’s office is 10 days. However, a later effective date may be specified by the rule. Emergency rules are often used as a short term fix while a similar, usually identical, rule goes through the normal rulemaking process. An emergency rule can only be in effect for, at most, 180 days or 30 legislative days, whichever is longer. The emergency rule may be terminated sooner than 180 days by filing a final order fixing the date of termination. Emergency rules cannot be renewed, nor can agencies submit multiple emergency rules that are very similar in content.

Network Node Project

In an effort to eliminate duplicate data entry about hazardous waste generators, staff with the Fee and Tax Unit in the Budget and Planning Section developed a concept for a computer application that will “flow” data from their information system to the U.S. EPA’s parallel system.

Currently, Fee and Tax Unit staff enter data into their own information system for all new and reactivated registrations as well as updates or changes to existing information on active registrations. This system contains information about reporting by generators, fee invoicing, payment, inspections and enforcement informity on generator sites. However, the registration and inspection information must also be entered separately to EPA’s system, RCRAInfo. The fact that entry has to be done twice increases the chance for errors and leads to discrepancies between the two systems.

In October 2007, work began on development of what is referred to as the Network Node Project. The Department of Natural Resources was awarded a grant from EPA for participation in the Environmental Exchange Network, an online partnership between states, tribes and EPA that aids in the electronic exchange of information. This grant is helping develop a system that will allow budget and planning staff to enter registration data once to their information system



and have this data “flow” nightly to EPA’s RCRAInfo system. All new data entered and changes to existing registrations are identified by the system and marked to be sent overnight to RCRAInfo. The same operation will be done for inspection data entered by the Hazardous Waste Program’s Compliance and Enforcement Section.

Recently the phase to rewrite the Fee and Tax Unit information system in a computer language called DB2 was completed. This was necessary to structure the data so it would “flow” properly to RCRAInfo and be compliant with Version 4.0 of that system, which has recently come online. Also, it will allow integration of generator data into the Department’s Facility Profiler data warehouse. The rewrite required a significant effort by Fee and Tax Unit staff to identify, research and determine the best resolution for all discrepancies between records in the Fee and Tax Unit’s information system and those in RCRAInfo prior to completion of the DB2 rewrite. A concerted effort to resolve these discrepancies started in November 2003, long before the Network Node Project began but the project placed a new emphasis on completing it. Since beginning this effort, more than 4,100 discrepancies in more than 16,500 active and historic records between the systems have been identified and resolved.

With the rewrite of DB2 completed, the final phase of the project is to test and then launch the Network Node application. This is expected to be completed in August or September 2009. The node will eliminate a significant amount of data entry saving staff time and will also eliminate the possibility of discrepancies between the Fee and Tax Unit information system and RCRAInfo.

What is RCRAInfo?

Hazardous waste information is contained in the Resource Conservation and Recovery Act Information, or RCRAInfo, a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act, or RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984.

– *epa.gov*

The Missouri Department of Natural Resources issued certificates of completion for seven Brownfields/Voluntary Cleanup Program sites during January through March. This brings the total number of sites cleaned up through the program to 421. Two of these completed sites are highlighted below.

Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.

Through the Brownfields/Voluntary Cleanup Program, private parties agree to clean up a contaminated site and are offered some protection from future state and federal enforcement action at the site in the form of a "No Further Action" letter or "Certificate of Completion" from the state.

ACME Premium Supply Building Lot 1 - Building in St. Louis

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the former ACME Premium Supply Building Lot 1 - Building site at 4100 Forest Park Ave. in St. Louis. The subject building is approximately 90 years old. It was originally used by the Ford Motor Company for automobile assembly. Subsequent property uses include manufacturing of electrical equipment, warehouse, storage and office space. This site was also a former Formerly Utilized Defense Site, namely a Naval Industrial Ordinance Plant.

Asbestos-containing materials and lead-based paint were confirmed in the building. These materials were removed in accordance with an approved remedial action plan. Due to the presence of trichloroethylene, or TCE, contamination in the groundwater of the building's parking lot, three air sampling events were conducted in the building's basement and first floor, during differing atmospheric conditions, to determine if the TCE contamination was a threat to the building's indoor air. The results of the air sampling showed levels of TCE in indoor air to be within acceptable levels for residential use. This Certificate of Completion applies only to the site building. The building's parking lot will continue be addressed as a separate Operable Unit for this site. A separate Certificate of Completion will be issued for the parking lot after its contaminants have been satisfactorily addressed. The Department determined that the site is safe for its intended use.

The building will be redeveloped into loft condominiums with some retail space, known as West End Lofts.

River Roads Shopping Center – Jennings

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the former River Roads Shopping Center - Main Mall, Lots A, 1A, D site at Halls Ferry Road in Jennings, near St. Louis. The River Roads Mall site consists of approximately 60 acres, and was originally developed as a large shopping center with various outlet businesses.

The main mall was demolished following asbestos abatement. A report about the abatement was submitted to the Brownfields/Voluntary Cleanup Program in March 2008. The Department determined the site is safe for its intended use.

The brownfield phenomenon most associated with the inner city now extends into the suburbs. Old inner suburbs such as Jennings have experienced changes in population, demographics and economics once vibrant shopping centers and plazas now litter the landscape of the inner suburbs. Aging malls and strip centers or the land they sit on have become ripe for reuse. These are "grayfields" – older, under-performing retail areas surrounded by empty, faded parking lots.

The River Roads mall was purchased by St. Louis-based Pyramid Construction for redevelopment. Pyramid enrolled the site in the Brownfields/Voluntary Cleanup Program in 2005 and obtained state Brownfield Remediation Tax Credits based on planned future developments. Although Pyramid ceased development operations in 2008, the environmental remediation portion of the project was completed. In 2006, the Brownfields/Voluntary Cleanup Program issued a Certification of Completion for another parcel of the mall property, the former Merollis Chevrolet. A third portion of the site is home to an operating grocery store and was excluded from the brownfields project.

Sites in Brownfields/Voluntary Cleanup

	Active	Completed	Total
January	357	417	774
February	354	419	773
March	354	421	775

New Sites Received

January

- Great Southern Wood Preserving, Buckner
- Bix Service (former), St. Joseph
- Forest West, St. Louis
- Carrie Avenue Rail Yard, St. Louis
- Salisbury Crude Oil Pipeline Release, Salisbury

February

- International Shoe Factory (Former), West Plains

March

- Dogwood Energy Facility, Pleasant Hill
- Van Brunt Street Car Barn (former), Kansas City

Sites Closed

July

- Muehlfarth Auto Parts and Salvage, St. Louis
- Cummins Mid America - Joplin, Joplin
- Bryant Motor Company, Sedalia

February

- River Roads Shopping Center - Main Mall, Lots A, 1A, D, Jennings
- ACME Premium Supply Building
- Lot 1 - Building, St. Louis

March

- National Imagery & Mapping Agency (Formerly Defense Mapping - Broadway St.), St. Louis
- Red Brick Community Tucker Gas Station (former), St. Louis

Drycleaning Environmental Response Trust Fund

	Active	Completed	Total
July	22	4	26
August	22	4	26
September	22	4	26

Inspections and Assistance

Regional Office Employees:

- Conducted 92 hazardous waste generator inspections.
 - 17 at large quantity generators.
 - 64 at small quantity generators.
 - 11 at conditionally exempt small quantity generators.
- Sent 36 Letters of Warning and three Notices of Violation to require actions to correct violations.
- Made 64 Environmental Assistance Visits to hazardous waste facilities during this three-month period. Environmental Assistance Visits are on-site visits with a representative of a facility. The visits are intended to improve the understanding of a permit, registration, certification, report or other similar requirement. Environmental Assistance Visits provide an opportunity to enhance environmental compliance with regulations.
- Received 63 citizen concerns regarding hazardous waste and conducted investigations for 50 of these concerns.

Hazardous Waste Program staff:

- Conducted one inspection of non-commercial treatment/storage/disposal facilities, or TSDFs, and 13 inspections of commercial TSDFs.
- Conducted one case-development inspection.

The Tanks Compliance and Enforcement Unit:

- Continued to address non-compliance issues resulting from compliance inspections. At the end of the third quarter of State fiscal year 2009, the unit entered, reviewed and responded to 897 compliance inspections.
 - Of those, 535 were issued return-to-compliance letters, with the remaining 362 needing some additional follow-up.
- Continued to address the financial responsibility violations as a priority issue.
 - There were 12 facilities referred to the unit with financial responsibility violations. Employee efforts during this time period resulted in 14 cases being referred to the Attorney General's Office for legal action, four draft settlement agreements and two finalized settlement agreements. The use of the expedited referral process approved by the Missouri Hazardous Waste Management Commission makes it possible for staff to address sites in a time-effective manner, thereby allowing time for the case managers to assist with the inspection reviews.

Polychlorinated Biphenyl Inspectors:

- Conducted 28 compliance inspections at various types of facilities throughout the state. The reports are forwarded to the U.S. Environmental Protection Agency Region 7, which has authority for taking any enforcement action that may be warranted according to the Toxic Substances Control Act.

Hazardous Waste Transporter Inspector:

- Conducted 11 commercial vehicle inspections during which one vehicle was placed out of service. As part of the Commercial Vehicle Safety Association's protocol, the Department sends the reports to the Missouri Highway Patrol. When the transporter corrects the violations, he or she certifies to the patrol the violations were corrected.

As of March, there are 201 licensed hazardous waste transporters in Missouri.

Hayes Lemmerz International - Sedalia Inc. – Sedalia

On Feb. 5, a Confession of Judgment and Settlement Agreement was finalized regarding the facility's failure to identify and properly dispose of listed hazardous wastewater treatment sludge for several years. This sludge, although meeting the definition of listed hazardous waste, had passed toxicity testing and the facility immediately changed its procedures to prevent generating listed waste and notified the Department of Natural Resources of its past violations.

Following federal and state policies for settling such self-reporting cases, a settlement was negotiated to try to capture the economic benefit of noncompliance without being unnecessarily punitive. Accordingly, a penalty payment of \$37,543.20 to discharge that violation was made to the Pettis County School Fund on Feb. 17, and a payment schedule for several years of unpaid fees and taxes will pay \$255,994.12 into state accounts on a schedule ending June 1, 2010.

This is a good example of the Department working with a proactive and forthcoming company to try to achieve a fair settlement. We took the circumstances into account but still upheld the law and tried to keep a level playing field for other companies that spent their time and money on efforts to comply with the environmental laws and regulations.

New Listserv Postings

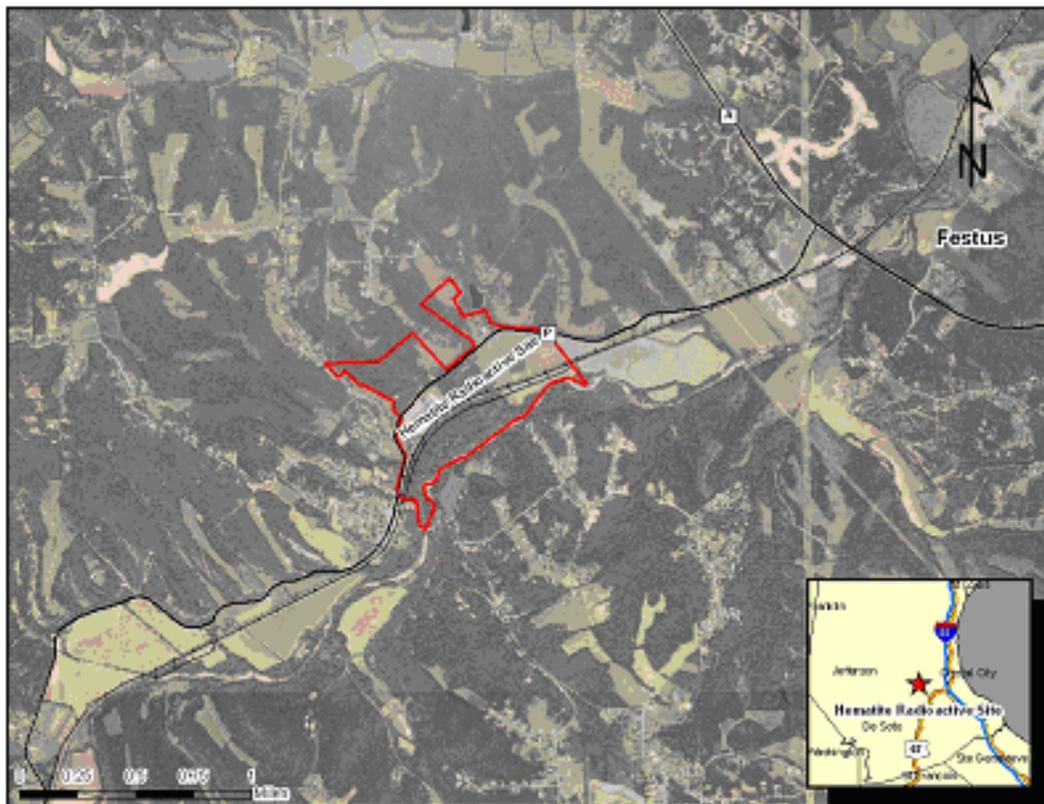
For the past quarter, the Enforcement and Compliance Assistance Listserv for Hazardous Waste Generators continued its topic of Missouri-specific regulations. It is vital to inform Missouri generators of the unique regulations that apply to them, and the listserv is the ideal forum for this type of outreach. Over the past three months, topics included universal waste, generator registration, transportation, recycled material and waste piles. Next quarter we will cover more Missouri-specific regulations. Subscribe to the listserv on the Web at www.dnr.mo.gov/env/subscribe_ecaHWg.htm.

Hematite Radioactive Site - Westinghouse Electric in Hematite

The Hematite Radioactive Site is a former fuel cycle facility located within 228 acres of property in Hematite. The facility is currently owned by the Westinghouse Electric Company LLC, a subsidiary of Toshiba, which is proposing the cleanup remedies. Westinghouse ceased facility operations in June 2001.

The Hematite Facility was originally constructed by the Mallinckrodt Chemical Works in 1955. The facility became operational in July 1956 and produced uranium metals for the nuclear fuel program of the U.S. Navy. Throughout its history, the primary activity at the facility was manufacturing uranium metal and compounds from natural and enriched uranium. Operations included the conversion of uranium hexafluoride gas of various Uranium-235 enrichments to uranium oxide, uranium carbide, uranium dioxide pellets and uranium metal to use as fuel rods in nuclear power plants. A major portion of their work involved making fuel for commercial nuclear power plants and other reactors. Although uranium material production was the primary function at the Hematite Facility, records indicate secondary activities such as uranium scrap recovery and a limited amount of work with thorium compounds as part of early research into the use of thorium in the fuel cycle.

In addition to the nuclear materials processed at the Hematite Facility, there was a variety of non-nuclear chemical products stored on-site and used in many of the processes. Those with the greatest potential for contaminating surface water, soils and groundwater at the Hematite Facility include strong mineral acids - hydrochloric, hydrofluoric and nitric - and chlorinated organic solvents such as perchloroethylene and trichloroethylene, also known as PCE and TCE. These chemical



Aerial map of the Hematite Radioactive Site.

products have the potential to affect the environment because of leaks from storage tanks or process pipelines, or waste disposal activities like evaporation ponds and the burial pits. A number of potential areas of concern have been identified at the Hematite Site and include those locations where these and other potential contaminants were stored, used or disposed.

Westinghouse Electric is working with the Department to complete the first Record of Decision, for this site. This record of decision will finalize the selection of the remedy for soil and sediments impacted with hazardous substances. The Department is currently reviewing the draft record of decision and plans to complete its review shortly. Westinghouse will respond to comments and submit a revised record of decision for Department signature.

Department signature is expected this summer. The implementation of the selected remedy will remain on hold for up to six months after the record of decision is signed. This is to allow the Nuclear Regulatory Commission's decommissioning plan for addressing radiologically impacted soil and sediments to be finalized.

The Federal Facilities Section actively coordinates with the Nuclear Regulatory Commission on their inspections, public meetings and the decommissioning plan. This ensures the record of decision and the decommissioning plan are consistent.

West Lake Landfill, Bridgeton

Background

The West Lake Landfill site is a 212-acre facility located in Bridgeton in St. Louis County. This site, originally a quarry and then a municipal and demolition landfill, was added to the Superfund National Priority List in 1990. This listing was done, in part, because of contamination from 47,000 tons of uranium ore processing residues mixed with soil disposed of as daily cover on portions of the site in 1973 by the Cotter Corporation. This waste originated from properties now part of the Formerly Utilized Sites Remedial Action Program's St. Louis sites. Other chemical waste from area industry also contributed to the site being placed on the Superfund list.

The site is divided into two operable units: Operable Unit 1 consists of two areas contaminated by radioactive waste; Operable Unit 2 consists of a former active municipal landfill, a closed demolition landfill and an inactive solid waste landfill.



An active portion of the West Lake Landfill, located in Bridgeton.

EPA finalized the Record of Decision documents for Operable Units 1 and 2 in May and July 2008, respectively. The selected remedy includes consolidation and containment of waste according to Missouri's solid waste regulations governing Subtitle D landfills and the Uranium Mill Tailings Radiation Control Act. The Department accepted the remedy selected by EPA in the records of decision and supports EPA's decision with the understanding that a robust and durable stewardship plan will be implemented. This includes long-term monitoring of groundwater, monitoring of landfill gas generation and regular inspections of landfill cap and drainage systems.

Current Issues

The Department reviewed and provided comments on the draft Remedial Design Work Plans for Operable Units 1 and 2 of West Lake Landfill. EPA hosted a remedial design meeting with the respondents to present preliminary comments about the draft work plans and discuss any technical issues related to the design. Representatives of the Department's Federal Facilities Section and Solid Waste Management Program attended the meeting. The meeting was highly productive with all issues being well received by all parties.

The Department will be heavily involved throughout the remedial design phase to ensure design components are consistent with record of decision and state laws and regulations, including the Department's Solid Waste Regulations. In addition to development of the remedial design, consent Decrees for remedial action work are being finalized. The Department is a party to the consent decrees, which include compensation of state costs by the respondents.

One of the main topics of discussion at the kick-off meeting was interim field work required for development of the remedial design. Samples of vegetation were collected in late March and are currently being tested for radiological constituents. Results of the sampling will be used to make decisions regarding clearing vegetation to ensure the safety of the public.

Additional field work consists of clearing for topographical surveys, gas probe installation, groundwater monitoring well installation, existing landfill cap investigation and existing stormwater network investigation. Federal Facilities Section personnel will review the work plan and provide oversight of the fieldwork. Clearing is expected to begin late spring. Gas probes and monitoring wells will be placed



Contractors at West Lake Landfill install a sealed double-ring infiltrometer to measure the performance of the existing soil cap.

by summer 2009 and sampling will begin immediately after and continue on a regular basis up to completion of the remedial design. The final report is expected by July 2010 and construction should begin in 2011.

The Department was contacted by representatives from the Missouri Coalition for the Environment with concerns about EPA's selected remedy for capping the West Lake Landfill. The coalition expressed opposition to the upcoming site work including vegetation to be cleared on the radiologically contaminated portions of the landfill. The Coalition is requesting to include West Lake Landfill in the Formerly Utilized Sites Remedial Action Program, which is a federal cleanup program administered by the U.S. Army Corps of Engineers, and possibly using stimulus funds to further address the site.

Formerly Utilized Sites Remedial Action Program - St. Louis Downtown and North St. Louis County Sites

The Formerly Utilized Sites Remedial Action Program's north St. Louis County and downtown St. Louis sites includes three key properties and approximately more than 100 surrounding neighbors being investigated and remediated by the U.S. Army Corps of Engineers. These sites were impacted by either the processing and extraction of uranium from ore, or the storage and transportation of byproducts.

The total volume of material to be removed and disposed is estimated at 1,110,000 cubic yards, which would be enough to fill more than 330 Olympic-sized swimming pools. The volume of impacted soil already removed and disposed is greater than 906,000 cubic yards. Estimated completion is in 2014. Federal stimulus funds totaling a few million dollars are helping increase volumes of soil shipped for disposal.

The overall goal of this project is to remediate waste to allow residential use. A few exceptions exist in this area that require land use restrictions due to prior agreements or the lack of waste accessibility.

Fort Leonard Wood

The Department has received a draft decision document to address groundwater contaminant migration concerns from two former municipal landfills in operation from 1981-1985 (FLW-002) and 1965-1978 (FLW-003), respectively. Primary contaminants of concern are solvents.

The selected remedies for both landfills consist of land-use controls, long-term management and soil cover enhancements. The selected remedies for these landfills follows the containment remedy outlined in the U.S. Environmental Protection Agency guidance document entitled *Application of the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, Municipal Landfill Presumptive Remedy to Military Landfills*. Pending the Department's review and approval of the final decision document, a letter of acceptance will be generated.

Financial Assurance and Protecting Human Health and the Environment

As discussed in previous quarterly reports, the U.S. Congress passed the Resource Conservation and Recovery Act of 1976, also known as RCRA, and the Hazardous and Solid Waste Amendments of 1984 to address public concerns about the management of hazardous waste. Missouri incorporates the RCRA regulations and most but not all of the Hazardous and Solid Waste Amendments regulations into the Missouri Hazardous Waste Management Law. Some of the Missouri requirements modify or add to the federal regulations. These regulations are designed to make sure facilities handling hazardous waste operate safely and protect people and the environment. The regulations include financial assurance requirements for facilities actively handling hazardous waste as a permitted treatment, storage or disposal facility and facilities with post-closure care or corrective action obligations.

The Missouri Hazardous Waste Management Law requires facility owners and operators to meet certain financial assurance and third party liability requirements. This ensures they will have enough funds set aside to close their facility, cleanup any releases of hazardous wastes or hazardous constituents and compensate third parties for bodily injury or property damage resulting from the release of those wastes or constituents. These funds must be available until all closure, post-closure care and corrective action activities are completed, and the Department notifies the facility owner or operator that financial assurance is no longer required. Financial assurance should be in place even if the facility declares bankruptcy.

Someone must ultimately pay for these environmental costs. The costs will either be internalized by the responsible facility or externalized to taxpayers. The financial assurance regulations are a means to ensure the facilities can cover the cost of human health and environmental protection related to their operations and historical releases to the environment instead of passing those costs to taxpayers.

The Missouri Hazardous Waste Management Law requires facility owners and operators to prepare closure, post-closure or corrective action plans, as applicable including cost estimates based on those plans. They must submit the plans and cost estimates to the Missouri Department of Natural Resources, along with financial assurance instrument documents ensuring money will be available to the Department should the facility owner and operator become incapable of completing those activities.

Facility owners and operators may use one or more of the following financial assurance instruments:

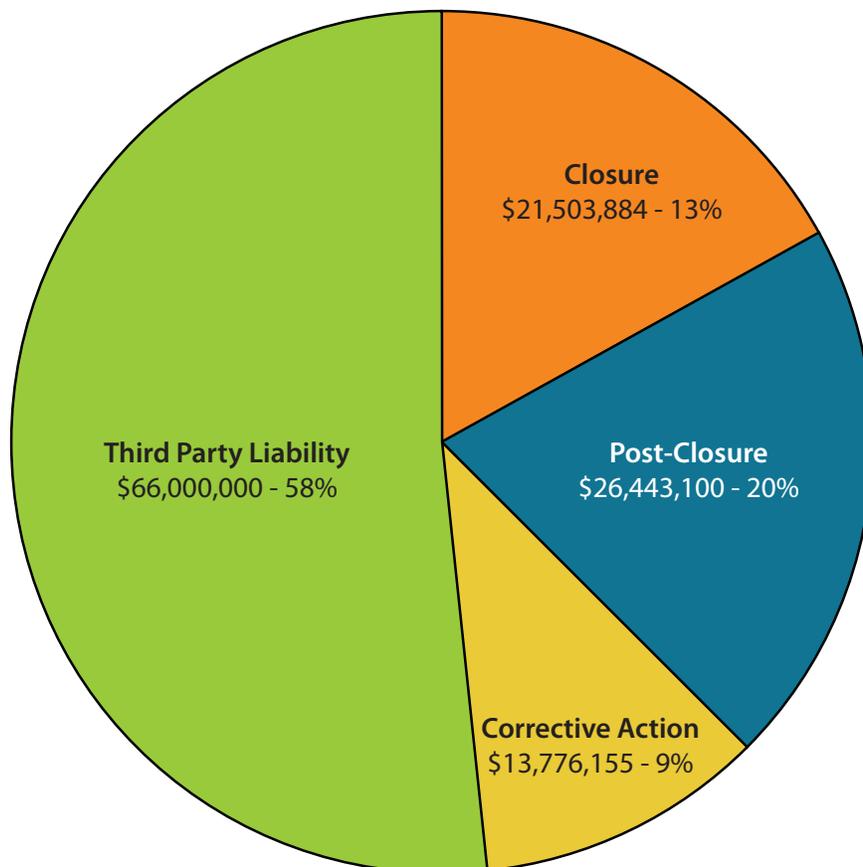
- Trust fund.
- Surety bond.
- Letter of credit.
- Insurance policy.
- Corporate financial test.
- Corporate guarantee.

The Permits Section monitors the financial health and annually reviews each Missouri facility required to provide financial assurance to make sure enough funding is available to cover the cost estimates for their activities.

Financial institutions providing financial assurance instruments, usually insurance companies or banks, have a stake in how the facility is operated and financially managed. If the facility owner or operator fails to meet their obligations, the institution providing the financial assurance is liable for the costs. This gives the financial institutions a strong incentive to monitor the facility.

The amount financial institutions charge for their services is based on the amount of risk they are assuming. Financially sound facilities with good business practices are rewarded with lower costs for their financial assurance instruments. This gives facilities an incentive to reduce their environmental risks. Financial assurance providers may deny coverage to facilities in financial distress or engaging in questionable hazardous waste management practices. Since the financial institutions are motivated to reduce the risk assumed from the hazardous waste facilities, regulators are able to rely, in part, on their expertise and scrutiny rather than having to provide their own banking, insurance or other experts.

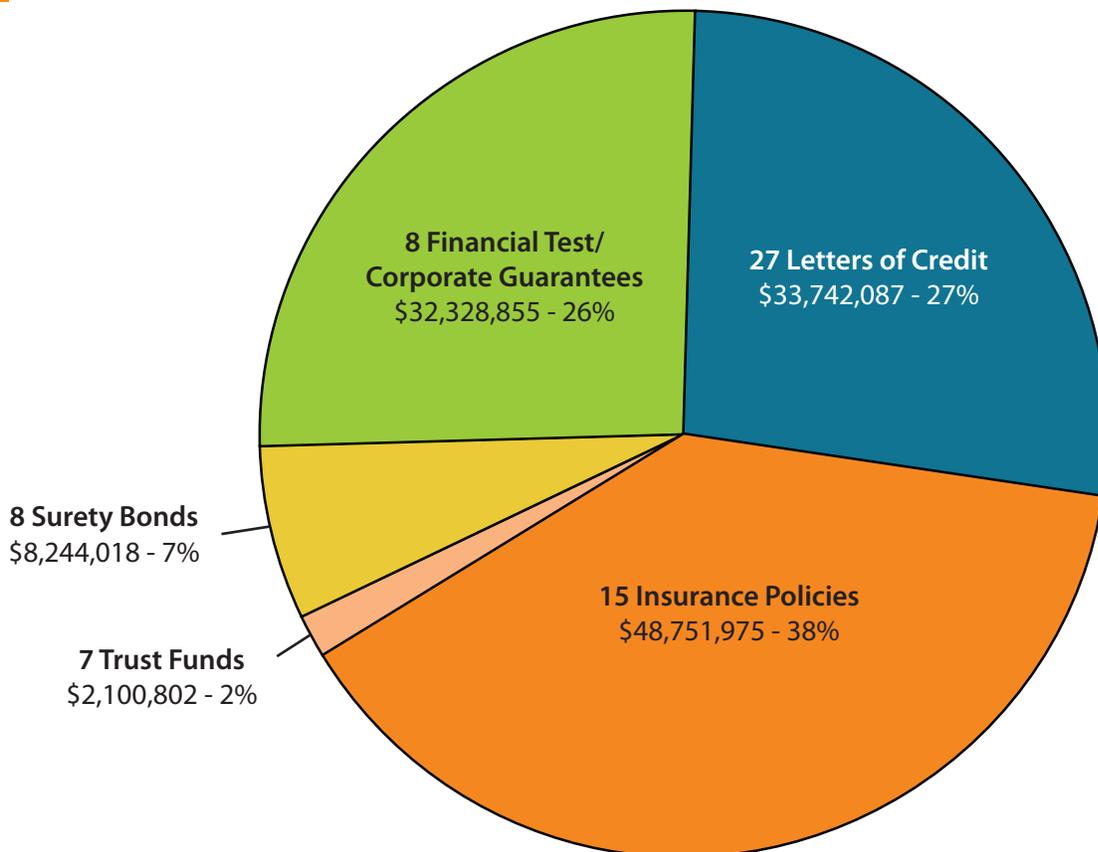
Purposes of Permits Section Financial Assurance



The current economic downturn has resulted in an increased concern about financial assurance issues, both within EPA and equivalent departments in each state. The states, including Missouri, participate in national conference calls, held at least monthly, by EPA to discuss issues and share solutions. One subject discussed at length in recent calls was the Chapter 11 Bankruptcy filed earlier in the year by a company that owns facilities in many states and EPA regions. In Missouri, the company owns two facilities. Both facilities are now closed and in post-closure care. Activities at both sites are currently conducted under Missouri Hazardous Waste Management Facility Permits issued by the Department.

The facility used a financial test as its financial assurance instrument. Late last year, the Permits Section reviewed the company's third quarter Securities and Exchange Commission filings and concluded the company could no longer pass the financial test. The Permits Section sent a letter requesting an alternate financial assurance instrument, but the company did not comply. A short time later, they filed bankruptcy. The company has a cost estimate of more than \$4 million in post-closure care and corrective action costs.

**Permits Section Hazardous Waste
Financial Assurance Instruments in Missouri**



At the time this article was written, the company was without financial assurance, but its continued to conduct post-closure and corrective action activities according to the terms of their Missouri Hazardous Waste Management Facility Permits. The future for the sites is uncertain. This example demonstrates that financial assurance, in particular the use of the financial test, may not always achieve the objectives for which financial assurance is designed.

Unfortunately, taxpayers have historically had to shoulder the financial burden of the environmental obligations at some facilities where insufficient funds were available. Bankruptcy, corporate dissolution and outright abandonment have created situations where facility owners and operators have avoided responsibility for environmental costs. Having solid financial assurance in place at the time a facility declares bankruptcy has been beneficial; however, the full extent of many environmental costs are not known until long after the facility has stopped handling hazardous waste. In most bankruptcies, regulatory agencies are considered unsecured creditors and must stand in line behind the secured creditors. In these instances, the agencies typically file bankruptcy claims that include estimates of remaining facility liabilities. Frequently there is little, if any money left for distribution after the secured creditor claims are paid.

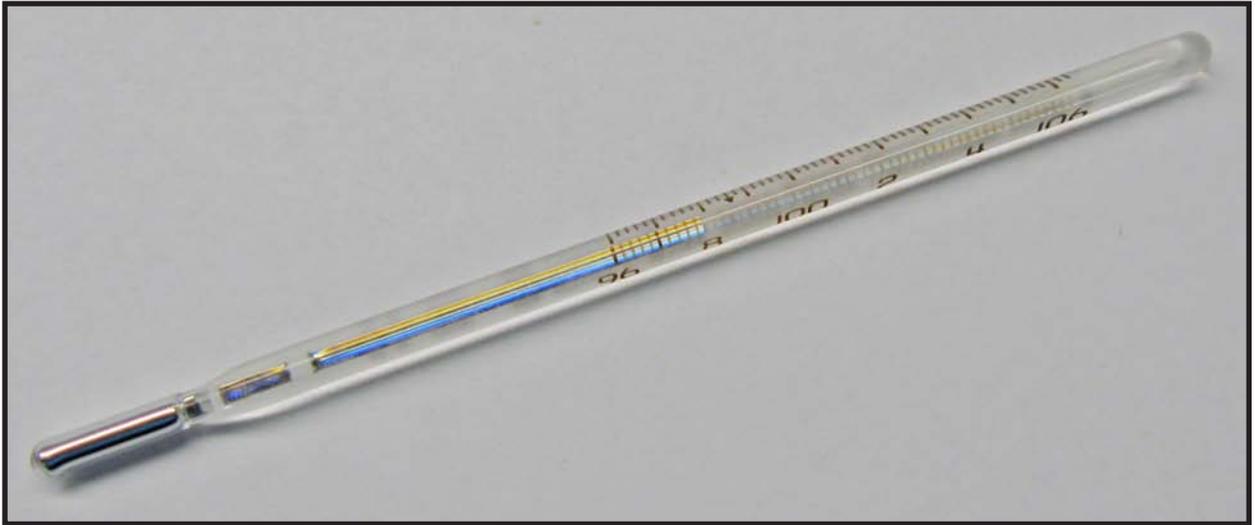
Some companies have grouped their environmental obligations by using corporate restructuring to retain assets and create separate entities to take responsibility for the environmental liabilities. These separate entities sometimes become overwhelmed by the liability burden and seek bankruptcy protection.

Had a tangible financial assurance instrument, such as a letter of credit, surety bond or insurance policy been in use at the time they declared bankruptcy, the Department may have been able to draw on the instrument and place the funds in a stand-by trust account for use in completing the required activities at the facility.

There are no tangible assets to draw on if a bankrupt facility had been using the financial test/ corporate guarantee as a financial assurance instrument. The Department's ability to recover any money is left in the hands of the bankruptcy process. Environmental responsibilities dismissed during the bankruptcy process create a situation where the facility may have to be transferred to the Superfund program for action, where taxpayers often wind up bearing the burden of the costs.

The Permits Section is currently responsible for overseeing more than \$125 million in facility financial assurance instruments. This amount is expected to increase significantly in the future, as many facilities select final remedies and move into the corrective action part of their facility's lifecycle. The Permits Section continues to look for ways to improve its oversight of financial assurance issues including:

1. Early identification of facilities facing financial difficulties.
2. Improving procedures for reviewing and approving facility cost estimates and financial instruments.
3. Providing input into the national financial assurance dialogue with EPA and other states.
4. Considering state regulatory changes that may be needed to address financial assurance issues as they arise.



Department Roundup Rids Missouri Homes of Nearly 800 Mercury Devices Additional 293 pounds of elemental mercury also collected

In February, the Missouri Department of Natural Resources helped make many Missouri homes safer by ridding them of nearly 800 mercury-containing instruments and an additional 293 pounds of elemental mercury. Another benefit to the mercury collection is a potential savings in spilled mercury cleanup costs.

The Department's Mercury Roundup, a month-long effort held in conjunction with more than 90 local fire departments and county health offices throughout the state, collected 509 thermometers, 34 medical devices and 252 switches. An additional 293 pounds of elemental mercury and 24 pounds of mercury contaminated debris was also collected. The mercury roundup was funded by a portion of the EPA's Superfund Consolidated grant.

The Department, working with local fire and health departments, provided mercury drop off buckets in communities statewide. Any private citizen or non-profit agency could leave mercury-containing instruments, like thermometers, blood pressure cuffs, thermostats or switches, at any of these sites. The collected items were brought to Jefferson City, where they were sorted and prepared to be picked up by a state contractor. The mercury will either be recycled or disposed of in accordance with hazardous materials regulations.

Short-term exposure to high levels of mercury vapors may cause serious health effects including lung damage, nausea, vomiting, diarrhea, as well as increases in blood pressure or heart rate, skin rashes and eye irritation. Symptoms from chronic or long-term exposure can develop in just a few weeks. Tremors, decreased eye-hand coordination, memory problems, insomnia and irritability can develop quickly. If these symptoms are not correctly identified and exposure is not prevented, then permanent nervous system damage can occur.

Superfund Section Finds Vienna Wells Site Eligible for National Priorities List

The Vienna Wells Site, located in Maries County, consists of three contaminated public drinking water wells and the suspected pollution source area, the former Langenberg Hat Company. Based on an investigation of the site, the Superfund Section determined the site is eligible for listing on the National Priorities List, or NPL.

The NPL is EPA's list of the highest priority hazardous waste sites in the nation in need of long-term evaluation and cleanup. Listing a site on the NPL is a lengthy process. A site is not eligible for federal Superfund remediation monies if it is not on the NPL.



Photo by Shelly Jackson

Department staff use a geoprobe to obtain a soil core outside the former Langenberg Hat Company.

Vienna's Public Drinking

Water Well #3 is the primary water supply for Vienna. Well #1 operates as an emergency backup and supplemental water supply. Well #2 was taken out of service in fall 2007 due to aesthetic concerns involving high iron levels. It is currently used by the Department's Water Resource Center to monitor the water level in the Ozark Aquifer.

In May 1997, a small amount of tetrachloroethylene, or PCE, was detected in Well #3. In fall 1998, the Department's Public Drinking Water Branch began requiring Well #3 be sampled on a quarterly basis for volatile organic compounds, which included PCE. Subsequent monitoring reported slowly rising levels of PCE in Well #3. In August 2006, these levels eventually exceeded EPA's Maximum Contaminant Level of 5.0 parts per billion. Currently, the levels are not in violation of the residential drinking water

standard, which is based on a four-quarter average. PCE has also been detected in Well #1 and Well #2 since 1994. As a result, in early 2007, the Department's Public Drinking Water Branch referred the site to the Hazardous Waste Program's Superfund Section to determine the source of the PCE. A suspected source of the PCE is the former Langenberg Hat Company located 160 yards southeast of Well #3. It is suspected a dry-cleaning agent containing PCE may have been used to clean felt used to make the hats. All three public wells are located within 1 mile of the hat factory.



Photo by Shelly Jackson

Staff remove a soil sample from the core.

Southwest Jefferson County Mining Site Proposed for National Priorities List

Following a letter of support from a former Missouri governor and with input from the Department, EPA has proposed the Southwest Jefferson County Mining Site be added to the National Priorities List.

Jefferson County is part of Missouri's Old Lead Belt, where lead mining has occurred for several hundred years. The primary environmental concern at this site is lead contamination in residential soils and private water wells.

Samples have been collected from approximately 1,118 properties located in Jefferson County. To date, 230 properties have lead-contaminated soil above 1,200 parts per million, or ppm. At this level, EPA prioritizes properties for clean up as time-critical removals. EPA has also identified 159 properties with lead-contaminated soil in the range of 400 ppm to 1,199 ppm. These properties will be addressed after the time-critical removals are completed. Water samples have been collected from 517 private water wells at this site. To date, bottled water has been offered to 41 residents whose wells have been identified with lead or cadmium above levels of concern.

EPA will continue to sample properties and conduct time-critical removals as highly contaminated properties are identified. A remedial investigation and feasibility study will be performed to determine the nature and extent of contamination, followed by an evaluation of alternatives to cleanup the contamination. The community will receive this information and will be given opportunity to comment before decisions are made about site cleanup.

American Recovery and Reinvestment Act - Underground Storage Tanks

The Hazardous Waste Program Tanks Section anticipates receiving \$3.254 million in additional funding through the federal Leaking Underground Storage Tank Fund. The department proposes to use the American Recovery and Reinvestment Act funding to address some of Missouri's abandoned underground storage tank sites through the use of private consultants to conduct assessments, site characterizations and cleanup activities. This money is to be used to address sites where the responsible party does not exist or is unwilling or unable to conduct the cleanup. Many of these sites do not have responsible parties or any funding to address the contamination.

The funds will allow the state to clean up sites that may otherwise lie vacant for years. The Department has developed an abandoned site list that includes sites eligible for funding from the Petroleum Storage Tank Insurance Fund. However, these sites may not have a viable responsible party to address the cleanup, including the \$10,000 deductible. The Department is coordinating activities with the Petroleum Storage Tank Insurance Fund at eligible sites.

Abandoned underground storage tanks, or USTs, pose environmental threats and economic development barriers to redevelopment and reuse of properties. The funds will help remove those barriers at a number of contaminated sites. This is viewed as a positive step towards providing economic stimulus to the consultants doing tanks work, subcontractors, creation of jobs, maintaining jobs, expanding existing businesses, creating new businesses and clearing the way for communities to redevelop and reuse these properties in a productive manner.

Presentations by Department Staff About Underground Storage Tank Issues

Several Hazardous Waste Program employees represented the Department at various meetings, conferences and workshops. Valerie Garrett, an Environmental Specialist IV, presented an update on the Tanks Risk-Based Corrective Action rulemaking at the 2009 Missouri Groundwater Association Meeting in March. Chris Veit, Tanks Closure and Technology Unit Chief, and Heather Peters, Compliance and Enforcement, Environmental Specialist IV, both presented papers at the 2009 National Tanks Conference held in Sacramento, California from March 29 to April 1. Veit presented a paper regarding the use of contractors to help reduce the number of open tank cleanup projects and Peters presented a paper about Missouri's joint inspection program.

Peters also presented a paper at the 2009 UST Compliance and Prevention Workshop on June 2-3, 2009. The topic of this paper is ways to streamline enforcement follow up actions to inspections conducted by the Department and by the Department's contractors.

Historic Highways Project (Route 66)

EPA and the Department of Natural Resources' Tanks Section are partnering in a Historic Highways Revitalization project. EPA is currently conducting an inventory of all abandoned tank sites along the former Route 66 corridor. This will be followed by a prioritization of the list of sites and communities, which are most likely to benefit from redevelopment and reuse of these abandoned sites. EPA and the Department will then look to partner with these communities, historic societies, nonprofit organizations, etc., in projects to begin revitalization of these areas.

Route 66 was constructed in the 1920s to take motorists from Chicago to Los Angeles. For over four decades, Route 66 operated as one of the country's main arteries of transportation across the United States. This highway entered Missouri over the "Chain of Rocks Bridge" north of St. Louis and entered Kansas in the Galena area. This highway was decommissioned in the 1970s with the building of Interstate 44, which follows much of the path of the former Route 66.

Many services, such as gas stations, restaurants, motels and drive-in theatres, were constructed along Route 66. As the interstate took the place of the original highway, many of these businesses closed or became abandoned. Several of the abandoned underground storage tanks were never properly addressed and many may have leaked gasoline into the soil and groundwater leaving a legacy of contamination that could pose a current or future risk to human health or the environment. This discourages redevelopment and reuse of these properties.

The Tanks Section wants to work with communities to provide assessments of abandoned gasoline stations for petroleum contamination. This would include funding from two areas. Funding from the Leaking Underground Storage Tank Fund would be used for sites eligible for the Petroleum Storage Tank Insurance Fund monies. The Tanks Section is proposing to use Brownfields 128(a) funding to conduct Targeted Brownfields Assessments at non-Petroleum Storage Tank Insurance Fund eligible sites. This would consist of Phase I and Phase II assessments.



Former gas stations located on Route 66 in Missouri.

CLOSURE														
Underground Storage Tanks	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	TOTAL	All Yrs
Closure Reports Reviewed	11	37	26	18	10	20	26	11	11	0	0	0	170	
Closure Notices Approved	12	14	5	15	7	7	8	14	16	0	0	0	98	
Number of Tanks Closed (Closure NFA)	30	46	71	40	25	46	36	22	25	0	0	0	341	
CLEANUP														
Underground Storage Tanks	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	TOTAL	All Yrs
UST release files opened this month	5	23	8	16	4	2	4	5	28	0	0	0	95	6,086
UST cleanups completed this month	17	22	8	4	8	11	10	25	15	0	0	0	120	5,051
Ongoing UST cleanups	1,033	1,040	1,042	1,057	1,058	1,052	1,048	1,035	1,025	0	0	0		
Aboveground Storage Tanks														
AST release files opened this month	1	1	0	5	0	0	2	4	2	0	0	0	15	419
AST cleanups completed this month	3	12	3	2	0	0	5	1	6	0	0	0	32	241
Ongoing AST cleanups	190	181	176	179	179	179	174	178	173	0	0	0		
Both UST and AST														
Total release files-both UST & AST	0	0	0	0	0	0	2	0	2	0	0	0	4	65
Cleanups completed-both UST & AST	0	0	0	0	1	0	3	1	1	0	0	0	6	36
Ongoing cleanups-both UST & AST	33	33	33	34	33	33	31	29	29	0	0	0		
Unknown Source														
Total release files-unknown source	0	3	1	2	0	1	1	0	0	0	0	0	8	261
Cleanups completed-unknown source	0	0	3	3	1	2	2	0	1	0	0	0	12	137
Ongoing cleanups-unknown source	144	146	143	135	134	129	125	124	121	0	0	0		
Documents Processed	293	200	209	207	159	149	226	216	252	0	0	0	1,911	

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