

# Hazardous Waste Management Commission Report

October through December 2008

Quarterly Report



Missouri  
Department of  
Natural Resources

## **Hazardous Waste Management Commissioners**

Patrick M. Gleason, Chair

Andrew Bracker, Vice-Chair

Ben Kessler

James T. "Jamie" Frakes

Elizabeth Aull

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

### **For more information**

Missouri Department of Natural Resources

Hazardous Waste Program

P.O. Box 176, Jefferson City, MO 65102-0176

[www.dnr.mo.gov/env/hwp/index.html](http://www.dnr.mo.gov/env/hwp/index.html)

Phone: 573-751-3176

Fax: 573-751-7869



**Missouri Department of Natural Resources**

## December 2008 Program Update

We've made it another year. Twelve months of those in the Hazardous Waste Program or associated with us working together to protect Missouri's environment.

The Brownfields/Voluntary Cleanup section completed their 400th cleanup in 2008. This means there are thousands of Missourians who go to work every day to a location that once was blighted or continued to pose a health or environmental hazard to their community.

Our Budget and Planning section kept us moving for another year, which is an accomplishment in itself. The section is truly the engine of the program, powering and tracking nearly everything we do, from collecting Hazardous Waste Generator fees to entering staff timesheets.

One of the Federal Facilities section's major sites completed their cleanup challenges in 2008 – a big first. The site was Jefferson Barracks, a military site with a long and interesting history. Federal Facilities might not have as many sites as other sections, but the sites they do have are large with a diverse range of contamination concerns.

The Compliance and Enforcement section handled several high profile enforcement cases in 2008, including Greenleaf, LLC, where approximately 73,272 pounds of improperly stored hazardous waste were removed from two facility locations. Through a listserv and other proactive outreach measures, the section works to make sure enforcement cases do not occur in the first place.

Besides being involved with high profile cases like Cameron, where they've worked to try to identify a potential environmental source that may have caused brain tumors in the community, the Superfund section also took pro-active steps. The section worked on an abandoned agrichemical facility inventory and other inventories mentioned in this report. Results from these inventories will be transformed into a plan and actions to reduce health and environment concerns at identified sites.

All in all, spills and other environmental concerns relating to hazardous waste at businesses are rare. One of the reasons for this is the Permits section. The section processed numerous permit and variance requests in 2008, each one requiring research by section staff working with different facilities across the state. The section also oversaw corrective action (cleanup) activities at various Missouri businesses.

With thousands of active underground storage tanks, there is always something to keep the Tanks section moving. The section's work with Webb City to give life to an old filling station has helped to highlight how dealing with, not ignoring, these abandoned tanks can benefit communities, the environment and Missouri's economy.

The program kept on track with many rules. The Electronics Recovery rulemaking process was kept moving thanks to program staff and the numerous stakeholders who assisted us. The Missouri Risk-Based Corrective Action rulemaking process also took great leaps forward in 2008, staying on path to a 2009 completion.

While we may pat ourselves on the back for another successful year in the Hazardous Waste Program, we do so while facing and moving forward. We are proud of the past and excited for the future. And, of course, ready for the present.

Sincerely,



Robert Geller, Director  
Hazardous Waste Program

**Table of Contents**

**Special Topics Section.....5**  
**Budget and Planning Section.....8**  
**Brownfields/Voluntary Cleanup Section.....10**  
**Compliance and Enforcement Section.....14**  
**Federal Facilities Section.....17**  
**Permits Section.....21**  
**Superfund Section.....24**  
**Tanks Section.....27**



**Missouri Department of Natural Resources**

### The basic rulemaking process

The rulemaking process can be confusing. There are many steps, waiting periods and deadlines a proposed rule must follow to eventually be included in the *Missouri Code of State Regulations*. After a rule is listed in the code of state regulations, it becomes effective and carries the weight and enforceability as any law.

Tim Eiken serves as rules coordinator for the Hazardous Waste Program. He helps sort the information and track rules in the rulemaking process.

### Early Stages

For an agency to write a rule, it must first have the authority to write such a rule. The authority for an agency to create a specific rule is based on authority from specific statutes in the Missouri Revised Statutes.

A rule can originate from many sources. An agency might recognize the need for a rule through stakeholder involvement or Missouri lawmakers may pass a law requiring a specific agency to craft a correlating rule. Often for the Hazardous Waste Program, EPA will update existing federal rules and Missouri's rules will need to reflect the update. Usually this is accomplished by incorporating the EPA rules by reference. To incorporate by reference, a specific date of publication of the Code of Federal Regulations is mentioned or cited in the corresponding Missouri rule. When the Missouri rule becomes effective, all rules published in the Code of Federal Regulations as of the publication date listed also become effective in Missouri.

If the rulemaking process for a new rule would begin today, that rule would not be effective for a minimum of 12 to 15 months. Other than the bare minimum necessary to assemble the language and properly format the text of the rule, this estimate does not include time spent drafting rule language. Because drafting rule language in the department is a collaborative effort that generally involves stakeholders, another three to six months can be added to the rule development process timeline. This allows time for holding meetings, soliciting input, circulating early drafts of the rule and revising the draft rule.

The term "statute" generally means an act or law passed by a legislative body, such as the Missouri General Assembly or the United States Congress. They are generally based on constitutional authority granted to the legislature to establish policies.

The term "regulation" generally means a rule or standard that has the force of law once published by an administrative agency within its statutory authority. Sometimes referred to as a "Rule." State departments, like the Department of Natural Resources, have the right to create rules to establish policy and procedure for carrying out their functions.

### **Regulatory Impact Report**

For rules that establish environmental conditions or standards, a Regulatory Impact Report must be created by the department after the draft rule language is developed. A Regulatory Impact Report is not required for rules that incorporate federal rules. The Regulatory Impact Report provides a general overview of the rule. Information in the regulatory impact report can include:

- Environmental and economic costs and benefits.
- Consequences of the rule.
- Who will be affected by the rule.
- Risks to human health, public welfare or the environment addressed by the rule.

When a Regulatory Impact Report is required, the first formal public comment period in the rulemaking process is an opportunity to comment on the Regulatory Impact Report. This 30-day public comment period starts after a notice is published in a Missouri newspaper. It is worth noting it is the report, not the rule, that is up for public comment during this period. Any comments relating to the report have to be formally addressed by the agency proposing the rule.

Following the comment period on the Regulatory Impact Report and prior to filing the proposed rule with the Secretary of State, another step in the rulemaking process is the finding of necessity. For programs in the Department of Natural Resources with commissions, this step involves asking the commission that oversees a specific program to decide if a proposed rule satisfies the requirements for the rule set in a statute or law passed by the Missouri legislature. The commissioners do not vote on the content of the draft rule, but whether the rule is necessary to fulfill the purposes of the statute that the agency has cited as providing the authority to draft the rule. Opportunities to debate the content of a proposed rule occur later in the process during the public comment period that follows publication of the proposed rule in the *Missouri Register*, a bi-monthly compilation of proposed rules.

### **The actual rule**

After the Regulatory Impact Report makes it through the public comment period and the appropriate commission finds the rulemaking necessary, the rule is ready for filing. The proposed rule is filed with the Administrative Rules Division of the Office of the Secretary of State and the Joint Committee on Administrative Rules, or JCAR, of the General Assembly on the same day.

The Joint Committee on Administrative Rules consists of five Missouri state senators and five Missouri state representatives. The committee's responsibility is to review rules filed by state agencies for compliance with Missouri statutes. A rule can be invalid if there is no legal authority for the agency to propose the rule, the rule is in conflict with state law or the rule is arbitrary and capricious.

There are many different parts to a proposed rule. The actual rule language is just one element of the whole package. Proposed rules filed with the Secretary of State need to have a purpose statement, cost statements, notice of comment and public hearing on the rule and, if applicable, a fiscal note. Fiscal notes explain the fiscal impact of a proposed rule.

If all the pieces of the puzzle are there, the proposed rule is then accepted by the Secretary of State's office and published in the *Missouri Register*. After it is published, another public comment period, this one finally focusing on the actual content of the rule, begins. At least 30 days after publication of the proposed rule, the department holds a public hearing where the commission hears testimony from the department and from interested parties. The public comment period usually closes seven days after the public hearing. After the comment period closes, an agency has 90 days to file an Order of Rulemaking with the Secretary of State. The Order of Rulemaking includes summaries of testimony at the hearing and all comments received, as well as the department's response to the comments. Sometimes comments received during the public comment period warrant the agency to make changes to the text of the rule. The comments received and any changes made to the text of the rule are included in the Order of Rulemaking.

The Order of Rulemaking is filed first with the Joint Committee on Administrative Rules, which then has 30 days to review before the Order can be filed with the Secretary of State.

If 30 days have passed, and the Joint Committee on Administrative Rules has not commented, the final order of rulemaking can be filed with the Administrative Rules Division for another publication in the *Missouri Register*. After publication of the Order of Rulemaking, the rule is published in an update to the *Missouri Code of State Regulations*. The rule is effective 30 days after the update is published in the *Code of State Regulations*.

And so ends the basic journey of a rule to become effective. While the steps described represent the textbook process for rulemaking, often unforeseen issues interrupt the process.

Future articles will explore and provide more detail on some of the finer points of the rulemaking process. Some future topics will include emergency rules and authorization.

The Hazardous Waste Program’s Budget and Planning section mailed approximately 3,200 initial invoices to generators and treatment, storage and disposal facilities for their reporting year 2008 waste fees. The reporting period was from July 1, 2007 through June 30, 2008.

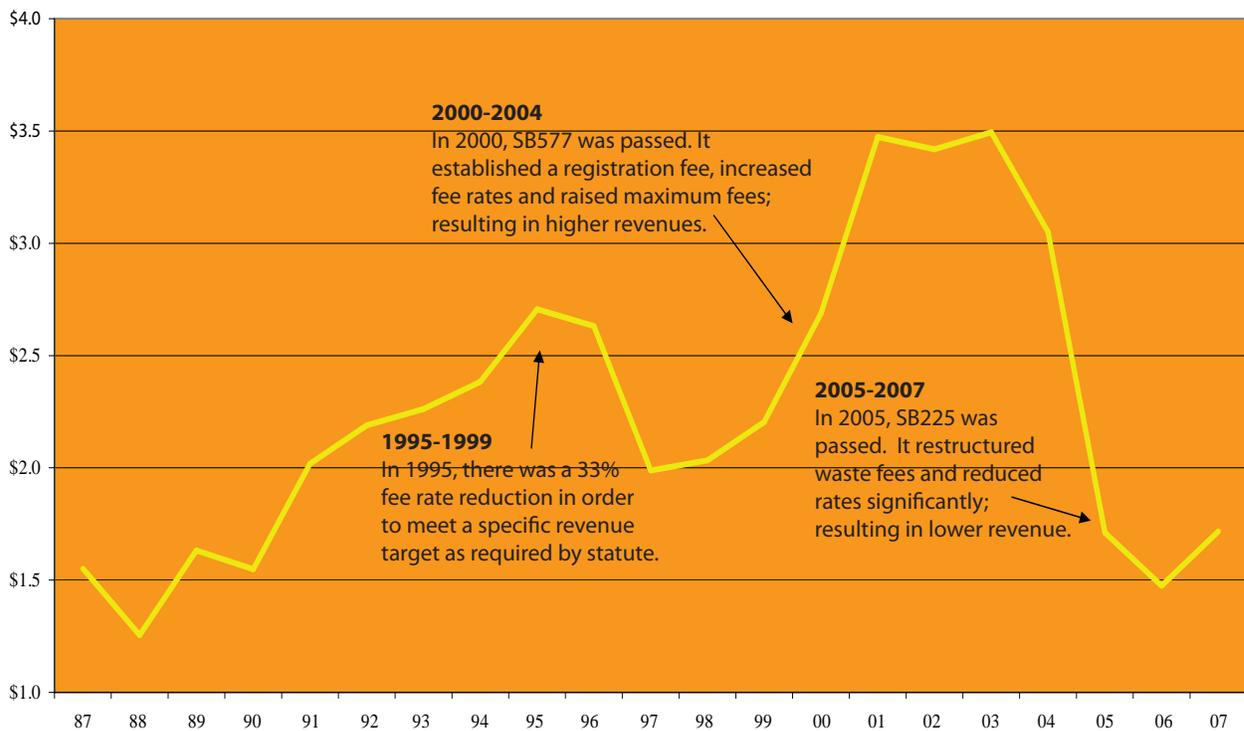
All hazardous waste generators in Missouri with a reportable amount of waste during the reporting year are required to pay specific fees based on the amount of that waste. Those fees include a \$100 annual registration renewal fee and a \$5 per ton In-State Waste Fee, which has a minimum of \$150 and a maximum of \$52,000. If any of their hazardous waste is disposed of into or on the ground, they may also be charged a Land Disposal Fee at the rate of \$25 per ton.

Treatment, storage and disposal facilities located in Missouri are required to pay a \$2 per ton Out-of-State Waste Fee on all hazardous waste they receive from sites outside of Missouri.

The statutory deadline for payment of these invoices was Jan. 1. A late fee equal to 15 percent of the total invoice is required by law if the invoice is not paid in full by the due date.

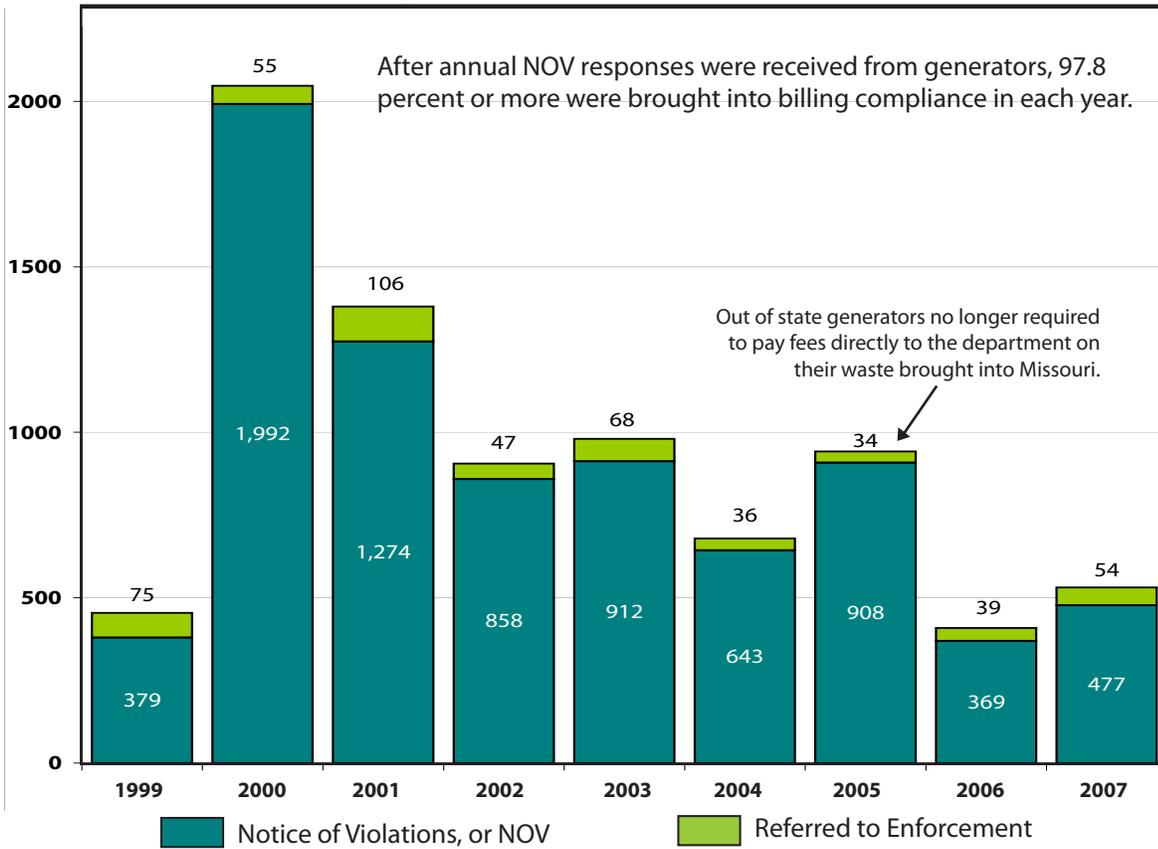
**Fees Collected on Hazardous Waste Generated by Billing Year  
(in Millions of Dollars)**

Billing year is July 1 to June 30 annually.



Fees apply to waste generated in Missouri, and on waste imported from other states.

**Billing Notices of Violation and Referrals by Billing Year**  
 (Billing Year is July 1 to June 30 annually.)



## Department Issues 400th Brownfields/Voluntary Cleanup Certificate to Habitat for Humanity St. Louis

Often, sites entered into Missouri's Brownfields program have future uses that range from commercial development to civic improvement. The program has proven, through the Hidden Treasures study, economic benefits tend to follow Brownfield redevelopment.

A string of certificates of completions issued in November deals with sites that ring a little closer to home.

In October, the Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program, or BVCP, issued a Certificate of Completion to Habitat for Humanity St. Louis for a portion of the organization's redevelopment of the JeffVanderLou Neighborhood in the 19th Ward of St. Louis.

The site has been used since before the 1900s for both residential and commercial purposes, including a former dry cleaner, battery, tire store, vulcanizing facility and possibly a former gas station. Since approximately 1980, much of the site has been blighted and vacant.

A Phase II environmental site assessment, conducted by statewide contractors through BVCP Section's Brownfield Assessment program, identified surface soil contamination consisting of lead and polycyclic aromatic hydrocarbons at concentrations exceeding levels safe for residential use.

Habitat for Humanity St. Louis enrolled the site in the BVCP for oversight and assistance with the cleanup. A portion of the contaminated soil was removed from the site, and clean soil was brought in as fill to elevate the surface grade of the property three feet above areas of contaminated soil. Orange snow fence was placed over the existing soil to serve as an indicating boundary between the existing soil and placed clean fill. The work was conducted in accordance with the department approved work plan and the Missouri Risk-Based Corrective Action technical guidance. The department determined the site is safe for residential use.



*Before redevelopment of the JeffVanderLou Neighborhood.*

# Missouri Department of Natural Resources - Hazardous Waste Program

## Brownfields/Voluntary Cleanup Section

With the cleanup completed, the site is being redeveloped into 13 single family residential properties as part of the larger Habitat For Humanity redevelopment and revitalization. This is one of three projects for which Habitatfor Humanity St. Louis used the Brownfield Assessment program and the BVCP.



“We greatly appreciate the services and expertise available to us through the department’s Brownfields Assessment program and the Voluntary Cleanup Program,” said Dan Sise of Habitat for Humanity St. Louis. “We’ve come to rely on these state programs to help us evaluate the environmental conditions on our proposed development sites, and to help us navigate the clean up issues that arise.”

Habitat for Humanity St. Louis is one of several non-profit organizations, including the Heartland Foundation and the Negro Leagues Baseball Museum, that have used the Brownfields/Voluntary Cleanup Program to help address contaminated sites and bring those properties back to productive use. In addition, many multi-national companies such as Ford Motor Company, General Electric, Energizer Battery and Starbucks use the BVCP to meet their environmental cleanup and development needs.



The BVCP began in 1994. Through the 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. The program has overseen voluntary cleanup of more than 400 Missouri sites, many of which were redeveloped following cleanup. The sites total nearly 4,000 acres of land assessed, cleaned up and made safe for reuse.



*New Habitat for Humanity homes taking shape in St. Louis.*

**Sites in Brownfields/Voluntary Cleanup**

	<b>Active</b>	<b>Completed</b>	<b>Total</b>
October	361	405	766
November	360	407	767
December	352	415	767

**New Sites Received**

October

- Independence FMGP #2, Independence
- American Document Destruction Co., St. Louis
- Boonville Track 104 Fertilizer, Boonville
- Lewis Elementary School, Excelsior Springs
- Explorer Pipeline - Walnut Grove, Walnut Grove
- Hocker Oil (Former), Ava
- Sedalia Landfill (former), Sedalia
- Tower Grove Hardware Building (former), St. Louis
- Harrison Education Center, St. Louis

November

- Kansas City Community Center, Kansas City
- Hickman Burke Auto (former), St. Louis
- Sisters of Most Precious Blood Convent, O'Fallon

December

- Greyhound Bus Terminal (Former), Kansas City
- Keil Opera House Redevelopment, St. Louis

**Sites Closed**

October

- National Guard Armory - Cape Girardeau
- Missouri-American Water Company, St. Louis
- Huebert Brothers Products, Boonville
- Tudor Building, St. Louis
- HHSL-JVL Ward 19 Project-3109 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3113 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3117 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3121 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3131 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3135 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3139 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3143 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3147 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3151 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3155 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3159 Sheridan, St. Louis
- HHSL-JVL Ward 19 Project-3163 Sheridan, St. Louis
- O'Fallon Center, O'Fallon
- Wright Way Truck & Trailer, Wright City

November

- Franklin School, St. Louis
- Wagoner Property, Springfield

December

- Prestwick Schuetz LLC (Formerly Deluxe Check), St. Louis
- Staten Island Cleaners (Former), Florissant
- National Imagery & Mapping Agency (Formerly Defense Mapping - Broadway St.), St. Louis

**Drycleaning Environmental Response Trust Fund**

	<b>Active</b>	<b>Completed</b>	<b>Total</b>
October	22	3	25
November	22	3	25
December	22	4	26

**New Sites Received**

December

Yorkshire Cleaners, Marlborough

**Sites Closed**

December

Staten Island Cleaners (Former), Florissant

## Inspections and Assistance

### Regional Office Employees:

- Conducted 108 hazardous waste generator inspections.
  - 19 at large quantity generators.
  - 59 at small quantity generators.
  - 30 at conditionally exempt small quantity generators.
- Sent 28 Letters of Warning and three Notices of Violation to require actions to correct violations.
- Staff also made 104 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.

### Hazardous Waste Program staff:

- Conducted two inspections of non-commercial treatment/storage/disposal facilities, or TSDFs, 10 inspections of commercial TSDFs.
- One sampling inspection.
- One compliance schedule evaluation inspection.
- One corrective action order inspection.

### Polychlorinated Biphenyl inspectors:

- Conducted 20 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 nine commercial vehicle inspections during which no vehicles were placed out of service. As part of the Commercial Vehicle Safety Association's protocol, the department sends the reports to the Missouri State Highway Patrol. When the transporter corrects the violations, he or she certifies to the patrol the violations were corrected.

As of December, there are 215 licensed hazardous waste transporters in Missouri.

**Echo Valley, Rolla**

In December 2008, Hazardous Waste Program staff visited Echo Valley, an electronic scrap site in Phelps County to ensure that the required cleanup had been completed. At Echo Valley, electronics, including televisions and computers, had been stored outdoors on the ground and exposed to the elements. E-scrap can contain harmful constituents including mercury, cadmium and lead which, if improperly managed, can be a very serious threat to human health and the environment. Echo Valley was first inspected in July 2002 and subsequently inspected multiple times to oversee the proper disposal and recycling of electronic waste. These efforts resulted in the complete cleanup of the site and approximately 4.5 million pounds of electronic scrap was sent to various recyclers to be reclaimed.

*Before*



*After*



### **New Listserv Postings**

The Enforcement and Compliance Assistance Listserv for Hazardous Waste Generators has covered a variety of topics from October through December. In October, the listserv discussed the training requirements for both large and small quantity generators and sent out a hazardous waste reporting reminder. In November, the listserv covered how generators can check their transporter's license, how to update their hazardous waste notification and tips on organizing their Uniform Hazardous Waste Manifests. Finally, in December, to avoid late fees an urgent reminder was issued to pay fees on time, along with a link to the department's *2009 General Industry Compliance Calendar*. December also marked the beginning of a continuing topic being explored over the next few months, explaining state specific regulations regarding hazardous waste. Subscribe to the listserv on the Web at [www.dnr.mo.gov/env/subscribe\\_ecaHWG.htm](http://www.dnr.mo.gov/env/subscribe_ecaHWG.htm).

### **E-Scrap Update**

The department began the formal rulemaking process to implement provisions in Senate Bill 720, part of which is also known as the Manufacturer Responsibility and Consumer Convenience Equipment Collection and Recovery Act. This bill was passed in the 2008 legislative session and was recently signed into law. Senate Bill 720 states computer manufacturers that sell their products in Missouri must have a recovery plan specifying how computers and computer accessories will be collected and recycled or reused. The bill assigned many duties to electronics manufacturers, retailers and the department, one of which is for the department to publish rules by July 1, 2009. The department asked for assistance in developing the rules from computer recyclers, retailers, manufacturers, local governments and consumers. The department held the first meeting on Oct. 2, 2008. During the initial meeting, the group discussed the responsibilities of the department and manufacturers along with the rulemaking timeline. On Nov. 6, the workgroup discussed a similar law in Texas and reviewed and edited a preliminary draft of Missouri regulations. During the Dec. 8 meeting, the workgroup discussed and edited the second half of the preliminary draft of Missouri regulations.

**Department of Energy - Kansas City Plant, Kansas City**  
**Kansas City's City Council action on tax incentives for the proposed**  
**new Kansas City Plant**

The Department of Energy, National Nuclear Security Administration, or DOE/NNSA, proposed to move the Kansas City Plant from its current location in the Bannister Federal Complex in Kansas City, several miles south to the Botts Road site. The new facility is expected to employ 2,100 workers. The General Services Administration selected a developer in January 2009 to build the 1.5 million square foot facility.

On Oct. 6, 2008, the Kansas City Council's Planning and Zoning Commission delayed a recommendation on the Botts Road location for the new Kansas City Plant. At the Oct. 20 meeting, the Planning and Zoning Commission approved \$40 million in tax incentives to build infrastructure for the complex on 156 acres at Highway 150 and Botts Road with an 11 to 1 vote.

**Lawsuit filed against DOE and GSA over new Kansas City Plant**

On Oct. 8, the Natural Resources Defense Council, along with several other groups and individuals, filed a lawsuit in the U.S. District Court for the District of Columbia against Samuel Bodman, Secretary of the Department of Energy and the General Services Administration. The lawsuit's aim was to stop the Department of Energy from proceeding with the construction of the new Kansas City Plant at the Botts Road site in south Kansas City until an Environmental Impact Statement has been completed. The Department of Energy completed an Environmental Assessment and released a Finding of No Significant Impact for the project. The lawsuit also asks that the cleanup of the current site be included in the Environmental Impact Statement for the new facility.

**Revisions to Agreement in Principle Program with the DOE Kansas City Plant**

On Oct. 20, the department signed the Agreement in Principle with DOE/NNSA. Such an agreement has been in place with the Hazardous Waste Program's Federal Facilities Section since October 1994. The purpose of this agreement is to provide independent oversight for monitoring, oversight of emergency response training and planning activities and citizen involvement at the plant.

Some Department of Natural Resources personnel carry a "Q Clearance", or security clearance, which allows them to view restricted areas and documents not available to other department personnel or the general public. Department staff undergo a rigorous screening process by the federal government to be approved for a Q Clearance.

Agreement in Principle programs at Department of Energy facilities exist, in part, to counter the perception that the Department of Energy is self policing at its nuclear facilities. This agreement also strengthens Missouri's ability to ensure the environmental monitoring and emergency response programs related to the Kansas City Plant are comprehensive and coordinated. This year's agreement is notable because Department of Natural Resources staff worked with DOE/NNSA personnel to update the agreement. The details of the agreement had not been reviewed and updated since its inception.

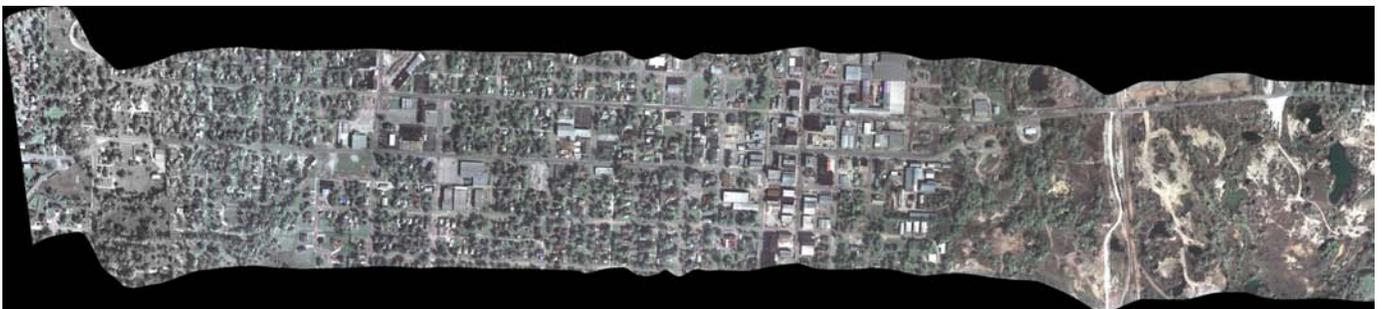
### Missouri Department of Natural Resources – Environmental Protection Agency Hyperspectral Imagery Mine Waste Initiative

Since 2005, an on-going department program has developed applications of Hyperspectral Imagery for characterizing and monitoring contamination. Many substances have a unique spectral signature that can be identified and mapped with hyperspectral imagery. The program uses the Civil Air Patrol's Airborne Real-Time Cueing Hyperspectral Enhanced Reconnaissance, or ARCHER, - Hyperspectral/High Resolution Imagery sensor. It began as an EPA funded pilot project and has continued under EPA Brownfields funding. For the past three years, the program has focused on studying areas with lead mining, milling and smelting related contamination.

The department and the Civil Air Patrol signed a Memorandum of Understanding to schedule flight missions for all state agencies. Missouri is the first state to develop such a relationship with the Civil Air Patrol. The Civil Air Patrol can now be deployed to perform site reconnaissance and acquire Hyperspectral Imagery at reasonable costs to the state. The department continues to help other state agencies coordinate with the Civil Air Patrol to schedule flight missions. A foreseeable application of aerial imaging will support the department's long-term stewardship goals. The department expects Hyperspectral Imagery to become an emerging technology with many environmental applications.

The department is also coordinating with several other state and federal agencies to access, collect, analyze and share Hyperspectral Imagery data. In 2007, the department began a collaborative effort with United States Geological Survey's, or USGS, hyperspectral imagery staff in Denver to take advantage of their expertise. The department recently held a teleconference in which the USGS Eastern Geographic Science Center, Washington D.C. participated. USGS has an on-going initiative with EPA to expand the use of hyperspectral imagery to support cleanups and monitor remedies. A recently completed study used hyperspectral imagery to identify lead stress in vegetation.

Missouri is the only state currently using ARCHER Hyperspectral Imagery for environmental applications. Because of this, and the availability of 16 ARCHER systems located at other EPA regions throughout the United States, EPA approved USGS participation in the department's project. The department believes this nationwide coordination effort will be beneficial to many agencies and may spark new interest in using this low cost data for environmental investigations.



*This aerial image of Webb City is an example of ARCHER Hyperspectral Imagery.*

### Department of Energy - Weldon Spring Site: Weldon Spring, MO Annual Inspection Update

The annual inspection for the Department of Energy's Weldon Spring Site was conducted on Oct. 28 through 30. Department staff participated in the inspection with staff from EPA, DOE, DOE's site contractor and members of the public. The purpose of the annual inspection is to confirm that remedial action components, including associated institutional controls remain in place and effective and to determine if maintenance or additional monitoring is needed.

Inspections related to the Weldon Spring Site were conducted at the:

- Disposal cell.
- Howell Prairie.
- Southeast drainage on Department of Conservation property.
- August A. Busch Memorial and Weldon Spring Conservation Areas.
- U. S. Army training area.
- Quarry.
- St. Charles Public Water Supply District #2 alluvial well field.
- Portions of the Katy Trail owned by the Division of State Parks.
- Two culverts under nearby highways with in place impacted material.



*Evidence of erosion was the only issue discovered during the annual inspection of the Weldon Spring Site.*

Only one minor issue with erosion within the 300-foot buffer zone of the disposal cell was found during the inspection. The department is working with the Department of Energy and EPA to determine the best course of action to develop a solution.



*Part of this class's visit to the Weldon Spring Site included a walk to the top of the disposal cell. Thousands of students visit the Weldon Spring Disposal Cell and interpretive center every year.*

### Institutional Controls Implementation Update

On Oct. 31, a multi-agency meeting addressed institutional controls for easements on property surrounding the Weldon Spring site. The Department of Energy continues to pursue institutional controls for the Weldon Spring site.

The Long-Term Surveillance and Maintenance Plan, which was finalized in July 2005, details the specifics of the institutional controls in place for the site and the institutional controls still needed.

Regarding the implementation of the easements, the plan states:

“DOE plans to negotiate easements with surrounding affected state agency landowners for implementing the use restrictions required on state properties...in the case of the Weldon Spring Site, DOE will seek easements for the purpose of restricting use of the contaminated groundwater and the hydraulic buffer zone, and also to restrict land use in the Southeast Drainage and Quarry reduction zone.”

This meeting was a significant step forward in the institutional controls implementation process.

#### **Weldon Spring Citizens Commission Adjournment and Public Meeting**

The Weldon Spring Citizens Commission adjourned through correspondence on Sept. 4, 2008.

A public meeting is to be held May 6, 2009 to discuss results of the annual inspection, other site activities and any other public comments and concerns. This meeting will also provide an opportunity for the Department of Natural Resources and the Department of Energy to thank the citizens' commission for its many years of volunteerism and dedication to the cleanup of the site.

#### **Whiteman Air Force Base, Knob Noster, MO**

In late September, the Missouri National Guard began construction of a helicopter hanger building at Whiteman Air Force Base in Johnson County. The construction is located over a contaminated area known as the Former Fire Training area, or FT-02. The construction plans included covering a monitoring well. The well is part of a remedy per the Record of Decision and was in place and used for the monitoring of a benzene plume at the FT-02 site.

Department staff visited the site on Sept. 29 to investigate the location of the well. Another focus of the site visit was to begin forming options regarding the relocation of the well and to minimize impacts to the National Guard's construction project. On Oct. 10 a letter was sent to Whiteman Air Force Base detailing options for the relocation of the monitoring well.

In addition, on Nov. 3, the base contacted the department about some stained soils and liquids released from a broken pipe during excavation activity within FT-02. On Nov. 4, representatives from the department investigated and sampled the stained soils and liquid material. Final analyses of the samples were received on Nov. 21. The final results identified numerous chemicals of concern, including benzene, at high concentrations requiring cleanup. The department is currently awaiting a response to its Nov. 12 letter that outlines several options to address the cleanup.

On Dec. 4, a site visit and meeting were conducted at Whiteman Air Force Base in order to assess the present site conditions at FT-02. The department also met with base personnel and Missouri National Guard representatives to discuss solutions at the site.

One agreement accepted by all parties was for Monitoring Well 05 to remain in place and be converted to a flush mount well within the Guard Hanger site, therefore no modifications to the Record of Decision for FT-02 will be required. It was also agreed that contaminated water in the excavated area will be captured, contained, characterized and properly disposed.

### **Resource Recovery in Missouri**

Missouri's Resource Recovery program encourages responsible recycling of hazardous waste using the best available technology and procedures. Missouri's resource recovery rule applies to facilities that reclaim or reuse hazardous waste or transform hazardous waste into new products that are no longer hazardous waste. Reclaiming a hazardous waste involves processing it to recover a usable product. For example, a facility that produces a spent solvent during its manufacturing process can distill or filter spent solvent to produce a clean solvent. The clean solvent can then be reused as a new product in the manufacturing process or sold on the open market.

Resource recovery facilities are classified as U, R1 or R2:

- U - includes facilities using, reusing, legitimately reclaiming or recycling more than 1,000 kg of hazardous waste on-site in a calendar month.
- R1 - includes owners or operators of a mobile recycling facility that recycle hazardous waste into a product reused at the same location where it was produced. It does not involve recycling hazardous waste to be reused at a different location.
- R2 - includes facilities that accept manifested hazardous waste from off-site for legitimate reclamation.

A resource recovery certificate is a type of formal approval resembling a permit. Missouri requires resource recovery facilities to meet certain financial assurance and operational standards beyond the federal law. Each facility receives a resource recovery certificate after its application is thoroughly reviewed to make sure it follows Missouri Hazardous Waste Law and Regulations. A resource recovery certificate is good for two years.

Many resource recovery activities do not require a certification. A facility can be exempt from needing a resource recovery certificate for any of the following reasons:

- The facility performs precious metal recovery or manages used oil.
- The facility's treatment process requires a Missouri Hazardous Waste Management Facility permit.
- The facility is classified as a Totally Enclosed Treatment Facility as defined by EPA policy and the state and federal regulations. A totally enclosed treatment facility is a hazardous waste treatment facility directly connected to a process that creates a product, byproduct, intermediate or a material used back into the process. The treatment facility must be completely contained on all sides and operated in a way that prevents hazardous waste from being released to the environment even during abnormal conditions or process upset. The facility must prove there is no predictable release of any hazardous waste from the unit by leakage, spills or emissions. Generally, this exemption is limited to pipelines, tanks and other tank-like equipment.
- The facility produces and treats its own hazardous waste, but processes less than 1,000 kg per calendar month. Currently, 70 facilities in Missouri have notified the department of their exempt status for processing less than 1,000 kg per calendar month.

There are currently 32 certified resource recovery facilities in Missouri. Out of that 32, there are seven facilities (22 percent) classified as R2, two facilities (6 percent) classified as R1 and 23 facilities (72 percent) classified as U. The U classified facilities are basically on-site distillation operations of hazardous waste generators.

Note: The following example is not intended as an endorsement or warranty by/from the Missouri Department of Natural Resources.

Tri-Rinse Inc. is a R2 certified resource recovery facility in St. Louis. Tri-Rinse transforms hazardous waste into new products that are no longer hazardous waste. Tri-Rinse was founded in 1981 and has grown to an integrated environmental company. It provides a variety of services to a diverse set of clients, ranging from small local companies to some of the largest Superfund cleanups in the United States for EPA.

As an organization, Tri-Rinse is divided into eight divisions:

- **Container Services** – Tri-Rinse customers have the option to use fixed base services through the St. Louis plant or mobile services with proprietary designed equipment. These processing services are for plastic and steel containers of all sizes ranging from one pint to 500 gallons, and include numerous recycling and disposal options. Tri-Rinse's process follows EPA guidelines for pesticide container processing.
- **Container Management Programs** – Tri-Rinse manages the national pesticide container disposal and recycling programs for many of the nation's agricultural-chemical manufactures and retail corporations. These programs cover a full range of plastic and steel containers, including one and 2.5 gallon jugs, 30 and 55 gallon drums and mini-bulk and tote tanks ranging from 60 to 500 gallons.
- **Rinse and Return Program** – Tri-Rinse offers a Rinse and Return Program for small and large agricultural-chemical containers, currently ranging in size from a 40 pound dry product container to a 500 gallon liquid tank. When delivered to Tri-Rinse, these containers are inspected for damage and their manufacture date. Old and damaged containers are processed and recycled. All good containers are thoroughly cleaned inside and out and their parts replaced as needed. The containers are then entered into their warehouse inventory and used when containers are needed for filling at manufacturing locations.



*Tri-Rinse Inc is one of 32 certified resource recovery facilities in Missouri.*

- **Storage Tank Services** – Tri-Rinse provides storage tank and line cleaning services for above ground chemical storage or liquid fertilizer tanks ranging in size from 1,000 to 2 million gallons. It also provides cleaning and removal services for underground storage tanks, such as old fuel tanks taken out of service.
- **Product Recovery/Pour-Up** – Tri-Rinse provides contract manufacturing-like services, but in reverse. If a company has surplus, contaminated or old product in small containers and they need it in bulk, Tri-Rinse handles the reverse process for them. While pouring from a smaller container to another container, any cardboard packaging and pallets are recycled. Recent pour-up projects ranged from 3,500 to 500,000 gallons.
- **Pour-Up Disposal Services** – Tri-Rinse provides disposal services for agricultural products for reasons ranging from contamination to being out-of-date. It receives agricultural products in everything from jugs to drums to mini-bulk tanks. The agricultural products are poured from the old container to another container and the pallets, any cardboard packaging and steel or plastic containers are recycled.
- **Off-Spec Warehousing** – Tri-Rinse offers warehousing services for agricultural-chemical companies for storing and processing quality hold, inventory hold, damaged products, etc. The inventory is managed and reported monthly to their customers.
- **Toll packaging and repackaging services** – Tri-Rinse recently added pesticide packaging and repackaging services. Tri-Rinse has a dedicated system and process area for fungicides and insecticides. The company is able to fill containers ranging from one quart to bulk size containers. A separate area contains dedicated systems for packaging herbicides in containers ranging from 15 gallons to bulk tankers. Tri-Rinse has filled nearly 500,000 gallons of product with no quality or environmental problems.

It is important to understand that only a small part of Tri-Rinse's business requires a resource recovery certificate. Tri-Rinse receives spent containers with acute hazardous waste in them, which makes the whole container a hazardous waste. Tri-Rinse recycles the containers after they are triple rinsed, making them no longer a hazardous waste. Plastic containers are sent through a shredding and grinding operation and further washed and packaged for shipment and recycling through numerous Agricultural Container Recycling Council approved outlets. Steel containers are crushed and sent directly to an on-site receiving trailer, which takes them to an approved steel recycling facility. The recycling facility consolidates the steel even further and the steel is shipped to a foundry.

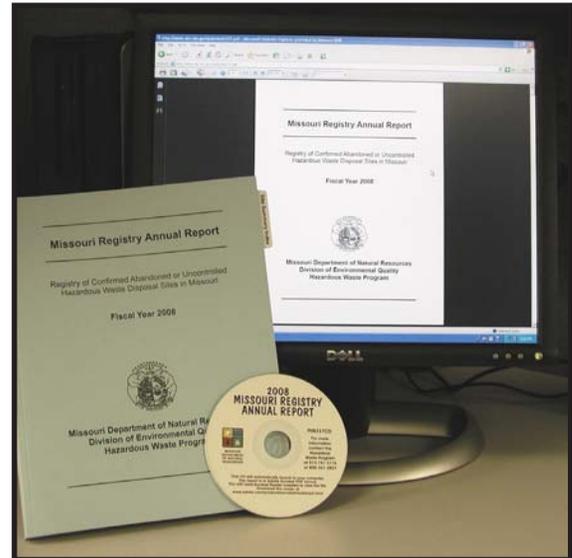
Responsible recycling and reclamation of hazardous waste through resource recovery can result in many positive outcomes. In 2008, Tri-Rinse's resource recovery program recovered approximately 3.1 million pounds of steel and 2.2 million pounds of plastic for recycling and reuse. While these totals represent the overall amount of materials recovered, the amount that required a resource recovery certificate was 22,000 pounds of steel and 170,000 pounds of plastic.

## Registry Annual Report

The *Fiscal Year 2008 Missouri Registry Annual Report – Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri* was completed and published this quarter. The annual report is available for free download on the Web at [www.dnr.mo.gov/pubs/pub337.pdf](http://www.dnr.mo.gov/pubs/pub337.pdf). It is also available for purchase in CD format for \$3 or in hard copy for \$12.

The registry is a list of sites that contain hazardous waste. By law and regulation, the registry also provides a variety of institutional controls that allow for contamination to be left on-site after cleanup is complete while still protecting human health and the environment.

Several inventories are included in the *Registry Annual Report*. The inventories are a part of a statewide effort to locate and evaluate the potential hazards caused by past practices at abandoned or unregulated facilities. Every effort has been made to make these inventories as accurate and current as possible. However, many other sites identified by using historical information have not yet been confirmed or assessed. The verification and investigation of these sites is an ongoing effort. As further information is discovered, suspected sites may be added or removed from the inventories.



*The Missouri Registry Annual Report is available in three formats--on the Web, on CD or as a paper copy.*

## Electroplating Facilities Inventory

The Superfund Section is in the early stages of creating an inventory of abandoned electroplating facilities to be addressed under Superfund. The goal of the inventory is to identify and document the most severely contaminated and threatening abandoned electroplating facilities in Missouri. The more serious threats to human health or the environment will



*Staff sample drums at a former electroplating facility to determine the contents.*

receive the highest consideration for cleanup. Another goal is to provide environmental data that may be used in planning future use or redevelopment of abandoned electroplating facilities.

A number of plating facilities are currently listed on the registry and two facilities are on the National Priorities List. When it is ready for publication, the abandoned electroplating facilities inventory will be included in the *Missouri Registry Annual Report*.

Electroplating is the process of applying a metallic coating to an article by passing electric current through an electrolyte in contact with the article. It is one of a number of metal finishing processes also considered in this inventory that serve functional (e.g. corrosion resistance) and decorative (e.g. applying luster) purposes. Common metals or alloys used in metal finishing processes include cadmium, chromium, copper, brass, bronze, nickel, silver, tin and zinc. The plating process results in the following waste types:

- Spent solvents.
- Cleaning and degreasing.
- Contaminated rinse water.
- Sludge from wastewater treatment.
- Spent plating solutions.
- Cyanide bearing wastes.
- Acids and caustics.
- Unused product.
- Laboratory wastes.

Soil, surface water and groundwater can be contaminated with these substances through spills, leaks and illegal disposal.



*Staff sample drums at a former electroplating facility to determine the contents.*

### **Abandoned Agrichemical Facilities Inventory**

The Superfund Section is also beginning to inventory abandoned agrichemical facilities throughout Missouri. The goal of the inventory is to gather information to help put these properties back into use for social, cultural, quality of life and economic benefits.

The inventory will first identify how many abandoned agrichemical facilities exist through visual observation and data collection. The department will work with local officials and communities to identify and prioritize these sites for Brownfield Targeted Assessments. The assessment will include reviewing federal and state environmental records, geologic and topographic conditions, historic property uses and environmental sampling. The assessment will determine the actual



*Once a busy farm supply store, this agrichemical facility will now be assessed for redevelopment as part of a statewide inventory.*

environmental conditions at the facility. The department will also help communities and local officials coordinate any future redevelopment activities. The Abandoned Agrichemical Facilities Inventory is paid for with a federal Brownfield 128 (a) grant.

The department welcomes any information about the location of abandoned agrichemical facilities and where good opportunities for redevelopment may be found.

### Big River Natural Resources Damage Assessment

The southeast Missouri mining district contains large chat piles and tailings impoundments covering thousands of acres of land.

The Big River, near Desloge, has received continuous deposits of lead, zinc and other metals resulting from the milling of metal ores. In 2008, the U.S. Department of the Interior's Office of the Solicitor General

requested trust resource agencies such as the Department of Natural Resources to collect data for use in a natural resources damage assessment of the effects of mining-derived metals on the aquatic resources of the Big River. Individuals representing four agencies formed the 2008 Multi-Agency Big River Assessment Team. The team worked together to gather critical data including the assessment of fish, mussel and crayfish communities. The completion of this effort required considerable rescheduling of staff and resources in order to meet the needs of the assessment. Department employees Frances Klahr, Greg Bach, Hillary Wakefield, Amy Bush and Chrisi Armbruster received letters of recognition for their efforts as part of this team.

The natural resources damage assessment program identifies injured sites and conducts assessments of injured natural resources to support damages claims. State natural resources include, but are not limited to, soils, surface water, groundwater, fish and wildlife. Claims are then filed against responsible parties, who are requested to restore or provide monetary compensation for injured resources. Money obtained through successful claims is used to restore injured resources.



*Department staff assist with crayfish sampling in the Big River.*

### Developing New Cost Recovery Procedure

The Tanks Section uses monies from the Leaking Underground Storage Tank Trust Fund or other state funding sources:

- To conduct petroleum investigations at abandoned sites where there is not a viable responsible party.
- At sites where there is a recalcitrant, or uncooperative, responsible party.
- To conduct source investigations.
- To conduct research on cleanup technologies.
- To conduct special redevelopment projects, known as USTFields.

The department does not cost recover every dollar it spends on investigation and cleanup. Neither EPA nor the state requires cost recovery at sites where, among other things, there is:

- No viable responsible party.
- An approved research project.
- A corridor study.
- A natural disaster.
- A USTField (redevelopment) project.

A new billing procedure for future sites was approved by the Division of Environmental Quality in January 2009. The new procedure will allow the department to bill for services provided to recalcitrant responsible parties soon after or during the work conducted by the department. This should result in an increased recovery rate of many of these costs in the future.

The Tanks Section is beginning development of a new procedure and billing process to invoice large complex tank sites during or immediately after projects. In the beginning stages of a project, the Tanks Section will determine the responsible parties and send letters to those potential parties. The Tanks Section will coordinate with the Petroleum Storage Tank Insurance Fund and will bill costs early in the process. More success at cost recovery from recalcitrant owners may be achieved with this process.

The Underground Storage Tank provisions of the Energy Policy Act focus on preventing releases. Among other things, it expands eligible uses of the Leaking Underground Storage Tank Trust Fund, and includes provisions regarding inspections, operator training, delivery prohibition, secondary containment and financial responsibility, and cleanup of releases that contain oxygenated fuel additives. Full text of the act is available online at [www.epa.gov/oust/fedlaws/publ\\_109-058.pdf](http://www.epa.gov/oust/fedlaws/publ_109-058.pdf).

### Tank Compliance Report

States are required to maintain, update and make available to the public a record of underground storage tanks regulated under Subtitle I of the Solid Waste Disposal Act, or SWDA. This public record requirement is located within Subsection (c) of Section 1526 of the Energy Policy Act of 2005, which amended Section 9002 in Subtitle I of the SWDA. The SWDA was the original legislation that created the underground storage tank program.

Each state that receives funding under Subtitle 1 of the SWDA, like Missouri, is required by EPA to meet certain public record requirements. It is up to EPA to decide the manner and form of the public record, as stated in the SWDA, Subtitle 1, Section 9002, Subsection (d). To the maximum extent practicable, the public record of a state must include:

1. The number, sources and causes of underground storage tank releases in the state.
2. The record of compliance by underground storage tanks in the state with Subtitle I or a state program approved under Subtitle I, Section 9004.
3. Data on the number of underground storage tank equipment failures in the state.

The Tanks Section Annual Public Record Report for the period of Oct. 1, 2007, through Sept. 30, 2008 was completed in December 2008. The report is available on the department's Web site at [www.dnr.mo.gov/env/hwp/docs/epareport12.3.08.pdf](http://www.dnr.mo.gov/env/hwp/docs/epareport12.3.08.pdf). This report will also be made available, by request, to those that do not have Internet access.

The first section of the report describes the number of underground storage tank facilities, individual regulated tanks, compliance rates in the state of Missouri and an individual breakdown of the sources and causes of releases opened in federal fiscal Year 2008. The summary and the listing of sources and causes includes the listing of four releases from aboveground storage tanks. These aboveground storage tank releases are regulated and the cleanup oversight is done by the department.

Missouri Department of Natural Resources - Hazardous Waste Program  
Tanks Section

Petroleum Storage  
Tanks Regulation  
December 2008

Staff Productivity	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
Documents received for review	251	273	251	292	182	234	0	0	0	0	0	0	1,483
Remediation documents processed	292	199	209	207	161	145	0	0	0	0	0	0	1,213
Closure reports processed	11	32	26	18	10	15	0	0	0	0	0	0	112
Closure notices approved	12	13	5	15	7	7	0	0	0	0	0	0	59
Tank installation notices received	3	9	5	6	4	2	0	0	0	0	0	0	29
New site registrations	8	12	6	11	6	2	0	0	0	0	0	0	45
<b>Facility Data</b>													
Total active and closed USTs	39,130	39,157	39,182	39,204	39,230	39,685	0	0	0	0	0	0	
Total permanently closed USTs	29,258	29,306	29,353	29,387	29,403	29,853	0	0	0	0	0	0	
USTs active and temporarily closed	9,872	9,851	9,855	9,817	9,827	9,832	0	0	0	0	0	0	
USTs in temporary closure	1,092	1,065	1,019	1,003	1,023	1,033	0	0	0	0	0	0	
Total hazardous substance USTs	392	392	392	392	393	394	0	0	0	0	0	0	
Facilities with active USTs	3,714	3,701	3,695	3,700	3,697	3,697	0	0	0	0	0	0	

Closures

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
Closure Reports Reviewed	11	32	26	18	10	15	0	0	0	0	0	0
Closure Notices Approved	12	13	5	15	7	7	0	0	0	0	0	0

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
UST release files opened this month	5	23	8	16	4	2	0	0	0	0	0	0
UST cleanups completed this month	16	18	6	2	5	8	0	0	0	0	0	0
Ongoing UST cleanups	1,033	1,040	1,042	1,057	1,058	1,052	0	0	0	0	0	0
<b>Aboveground Storage Tanks</b>												
AST release files opened this month	1	1	0	4	0	0	0	0	0	0	0	0
AST cleanups completed this month	3	12	3	2	0	0	0	0	0	0	0	0
Ongoing AST cleanups	190	181	176	179	179	179	0	0	0	0	0	0
<b>Both UST and AST</b>												
Total release files-both UST & AST	0	0	0	0	0	0	0	0	0	0	0	0
Cleanups completed-both UST & AST	0	0	0	0	1	0	0	0	0	0	0	0
Ongoing cleanups-both UST & AST	33	33	33	34	33	33	0	0	0	0	0	0
<b>Unknown Source</b>												
Total release files-unknown source	0	3	1	3	0	1	0	0	0	0	0	0
Cleanups completed-unknown source	0	0	3	3	1	1	0	0	0	0	0	0
Ongoing cleanups-unknown source	144	146	143	135	134	129	0	0	0	0	0	0
<b>Documents Processed</b>	292	199	209	207	161	145	0	0	0	0	0	0

Effective December 2008 tanks with unknown substance will be included in total figures. Some measures are re-calculated each month for all previous months to reflect items added or edited after the end of the previous reporting period.