

# Hazardous Waste Management Commission Report

January through March 2010

Quarterly Report



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

*Superfund staff collected hundreds of soil samples from northwest Missouri in January.*

## **Hazardous Waste Management Commissioners**

James T. "Jamie" Frakes, Chair

Andrew Bracker, Vice-Chair

Elizabeth Aull

Michael R. Foresman

Charles Adams

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

### **For more information**

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**Missouri Department of Natural Resources  
Hazardous Waste Program**

## March 2010 Program Update

Commissioners,

It is my honor and privilege to have been selected to serve as interim director of the Hazardous Waste Program while the search for a permanent replacement is conducted. An added benefit of this role is the opportunity to work with you, our commissioners, on hazardous waste issues facing Missouri.

This quarterly report covers January, February and March. Winter months generally mean more inside work for program staff. Outdoor environmental work by private businesses and contractors typically do not pick up until spring and frozen ground can make sampling difficult. But as is shown in the Superfund section of this report, there are some times when you don't get to wait until a nice, mild spring day. Staff organized and led a large January sampling effort in northwest Missouri. Nearly 600 soil samples were taken from farm fields and residential yards as part of the department's Tannery Sludge Investigation.

Superfund wasn't alone out in the elements. Tanks Section staff were continually in the field, overseeing environmental contractors working on American Recovery and Reinvestment Act leaking underground storage tank projects. Tanks staff were also kept busy in the office, making sure recovery act funds were responsibly and appropriately obligated for the Missouri sites selected for the project.

A quick glance at the Brownfields/Voluntary Cleanup Program's section of the report shows there was no winter "slow-down" for the rehabilitation and redevelopment of underutilized properties and buildings. While each completion is an accomplishment worth celebrating, one in particular is the KC Live Entertainment District – Block 138 in Kansas City. This former vaudeville and movie house built in the 1920s will continue to entertain visitors like it once did – it is now AMC Entertainment's flagship movie theatre.

The Federal Facilities section highlights outreach efforts at the Weldon Spring site, particularly at the site's interpretive center. This center gives locals, school groups and visitors from all over, the opportunity to learn about the history of the site and understand the reasoning behind the decisions involved with the cleanup of the site.

All of the program's progress in this quarter occurred when state agencies have become increasingly strapped for resources. The ability to stay focused on what's truly important, protecting Missourians from threats posed by hazardous waste, is one of the truly remarkable and admirable aspects of Hazardous Waste Program staff.

Again, I look forward to working with you, our commissioners, in the coming months. Never hesitate to contact me with questions or comments regarding the Hazardous Waste Program or the department.

Thank you,



Jim Belcher

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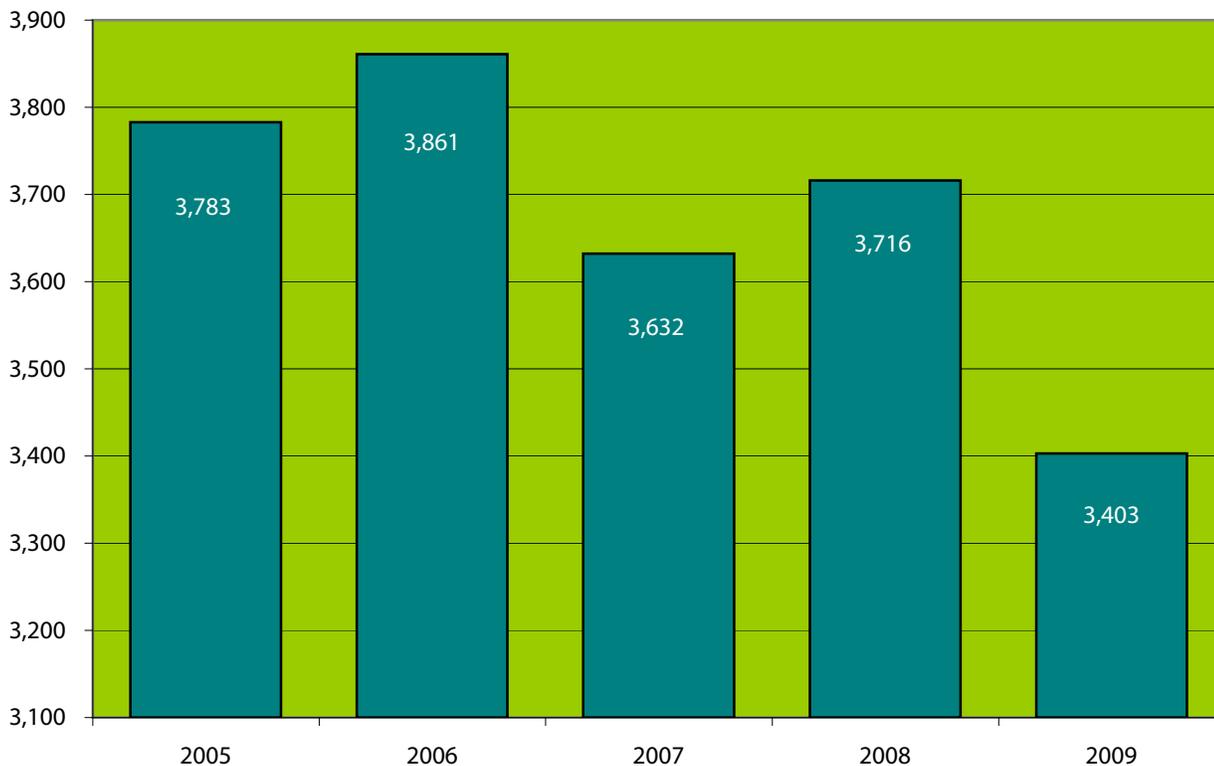
# Missouri Department of Natural Resources - Hazardous Waste Program

## Budget and Planning Section

The Budget and Planning section takes many steps to assist registered hazardous waste generators comply with reporting requirements. These include:

- Sending an acknowledgment letter - This letter is sent to all generators when they initially register. It contains a link to the reporting form on the Internet. The form instructions outline the reporting requirements.
- Electronic reporting capability - When generators receive their registration acknowledgment letter, an additional letter is included explaining they have the option of filing their reports electronically. Completed electronic reports can be e-mailed to the Hazardous Waste Program as a file attachment. A special e-mail address has been established in the program for the sole purpose of receiving these reports. A Personal Identification Number form is also sent with the electronic reporting letter. This form allows the reporter to establish a four digit numeric value to be used in place of a physical signature on their electronic report.
- Report reminder postcards - Each year in late May or early June, the program sends these postcards reminding all registered generators the reporting year will be ending soon (June 30). It also lists a Web address for the reporting forms and a phone number to call if there are questions.
- List-serv notifications - The program maintains a list of e-mail addresses of individuals who have indicated they wish to receive notices and updates about reporting information. This can include things such as revisions to report forms and links to revised versions of forms. Those on the list-serv also receive annual reporting reminders through e-mail rather than a postcard.

### Generator Reports by Reporting Year



The Missouri Department of Natural Resources issued certificates of completion for 21 Brownfields/Voluntary Cleanup Program sites during January through March. 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.

### **2601 Industrial Drive in Jefferson City**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the 2601 Industrial Dr. site in Jefferson City. The 7-acre site includes a 104,000-square-foot building constructed in 1956 by Von Hoffman Press and used as a printing and book binding plant until 1967. From about 1971 to 1980, the facility reportedly was leased to McGraw-Edison for fabrication and assembly of small electrical power tools. Maytag acquired the site in 1983 and used it as a warehouse and distribution facility. In 1996, SSL Corporation of Quincy, Illinois purchased the northern 4.6 acres, which contained the 104,000-square-foot warehouse, with the option to purchase the remaining portion of the property. Maytag retained the southern 2.4 acres for remediation purposes, which were contaminated from industrial activities, along with the canopy loading dock and truck bay.

The historical power tool making process during the 1970s reportedly included the use of a varnish dip tank to seal the motor windings within the power tools and a follow-up degreasing operation. Evidence of chlorinated solvents, consistent with those used in the degreasing operation, was discovered along the back of the facility during the remedial investigation. The facility had previously used an on-site incinerator for disposal of its solid wastes and later investigations discovered evidence of residual ash as fill material. Additionally, evidence of volatile organic compounds was detected in sludge from the on-site septic tank. The site was enrolled in the program in September 1995 to address the contamination.

Ash-related metals, chlorinated solvents and low levels of polychlorinated biphenyls had been released to soil at the site since operations began in the 1950s. Whirlpool Corporation, formerly Maytag, began remedial actions in 1997. Remediation of the septic tank, ash fill and solvent-contaminated soil was completed in August 2000. The on-site cistern tank was cleaned out and closed in place. Approximately 8,800 tons of contaminated ash, soil and solid waste were excavated and disposed of at a Subtitle D landfill. Maytag also installed a geo-membrane barrier at the northern extent of the excavation to help prevent contaminants from migrating out from under the loading dock. Contaminated soil remains in limited locations beneath the loading dock areas. The loading dock and truck bay area currently act as a cap to prevent direct exposure to the contaminated soil. Indoor air samples collected from the existing building showed no significant contamination of indoor air.

Maytag conducted investigation and monitoring of chlorinated solvent contamination in shallow groundwater. The evaluation of site groundwater analytical data indicated natural attenuation was occurring and the concentrations of contaminants in the perimeter of the plume appeared stable and meet the remedial objectives for the site. Groundwater modeling results demonstrated contaminant levels would not be likely to exceed cleanup objectives at the site boundary, which protect the creek downstream. The department determined the site is safe for its intended use.

### **Former St. Louis Steel Products Facility in Hazelwood**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the St. Louis Steel Products Facility - Former site, located at 133 McDonnell Blvd. in Hazelwood. General Motors used the 11-acre site for refurbishing electromotive engines from approximately 1950 until 1985. In 1991, St. Louis Steel Products purchased the facility for manufacturing steel products and in 2004 the property was purchased by Great Ledge Development for commercial or light industrial redevelopment.

A 1,000 gallon oil recovery underground storage tank used to store oil collected from an oil-water separator and two 30,000 gallon heating oil underground storage tanks for the boilers were removed from the site in 1992. Remediation work was conducted in 1992 and 1995 due to contamination in the soil from the underground storage tanks.

During demolition of the manufacturing buildings, petroleum impacted soil was encountered under the building footprint. Leaking pipes that delivered heating oil from the underground storage tanks to the boiler are the suspected source of the petroleum contamination. A preliminary investigation identified diesel range organics in soil and a subsequent investigation also identified volatile organic constituents in soil from previous plant operations.

Following discovery of petroleum-contaminated soil during building demolition, an investigation was conducted by digging 32 test pits and a 100-foot long trench. Soil samples were taken, confirming the presence of diesel range petroleum contamination. An excavation was conducted and approximately 7,539 cubic yards of contaminated soil was removed and disposed of from the site. During these sampling and excavation activities, an area of soil contaminated with volatile organics compounds was discovered. Additional sampling and excavation was conducted, and another 2,356 cubic yards of contaminated soil was removed and disposed of at the site.

The former St. Louis Steel Products site was also included as one of the vicinity properties in the St. Louis North County Sites of the Formerly Utilized Site Remedial Action Program, or FUSRAP. Soil removal and sampling has been conducted at the site. The property owners recently received a notification from the Department of the Army, Corps of Engineers that no further action as part of the federal program is required at the site. The department determined the site is safe for its intended use.

### **Former American Brake in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the American Brake-former site, located at 1920 N. Broadway in St. Louis. The site is located southeast of the intersection of N. Broadway and Tyler Street in an industrial area in northeast St. Louis. The facilities on the site were part of the American Brake Co., constructed in the early 1900s. The main building and several minor buildings remain; others have been demolished. Koken Manufacturing Co., a manufacturer of barber and beauty shop chairs, subsequently occupied the property. 1920 N. Broadway, LLC entered the program for remediation of asbestos, lead-based paint and potentially impacted soil on the site.



*Former American Brake Building*

## Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

### Brownfields/Voluntary Cleanup



Investigations revealed the presence of asbestos-containing material and lead-based paint within the building and soil contaminated by benzo(a)pyrene, lead and arsenic in the south portion of the site.

The remedial actions included removal of all asbestos-containing material found on-site and lead-based paint removal using sandblasting, wet-scraping, demolition and encapsulation for the wooden windows located on the northwest section of the basement through the third floor. An Operation and Maintenance Plan for the lead-based paint left in place was developed and includes regulatory information, forms and instructions for disclosure and annual inspections. Fluorescent bulbs and polychlorinated biphenyl ballasts were removed for recycling. An asphalt cap was placed as an engineered barrier in the parking lot on the south side of the site to limit the potential for exposure to surficial soils by site workers and visitors. The department determined the site is safe for its intended use.

The building was remodeled for office space.

### VIP Cleaners in St. Peters

The Missouri Department of Natural Resources' Drycleaning Environmental Response Trust, or DERT, Fund issued a Certificate of Completion for the VIP Cleaners site, located at 561 Mid Rivers Mall Dr. in St. Peters. The site is a drycleaner located in the 10-acre St. Peters Square Shopping Center in St. Charles county. The buildings were constructed in 1990 on previously undeveloped land near I-70. The drycleaner has used tetrachloroethylene solvent in a dry-to-dry system from 1991 to the present.

VIP Cleaners leases space in a building on the property. A Phase I and subsequent Phase II Environmental Site Assessment identified the presence of tetrachloroethylene-impacted soil and groundwater at the location of VIP Cleaners. Wentzway Corporation entered the site into the fund for investigation and cleanup of hazardous substances in soil under the floor of the building and groundwater. Further site investigation included installation of three groundwater monitoring wells and development of a conceptual site model. The wells were sampled over a nine month period and samples were analyzed for chemicals of concern, tetrachloroethylene, trichloroethylene, cis-1,2 dichloroethylene and vinyl chloride using EPA Method 8260B. Chemical concentrations in groundwater do not exceed the default target levels. A Missouri Risk-Based Corrective Action Tier 2 Site Specific Risk Assessment software analysis of the data produced by the investigation confirms the levels of contaminants in soil under the building's floor are acceptable for non-residential use of the Property. The department determined the site is safe for its intended use.

### **Cape Fair Spill Site**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Cape Fair Spill Site, located at Hwy. 76 in Cape Fair. This site is an approximately 0.5 acre site in rural Cape Fair where a gasoline tanker overturned and released product into the soil on a Missouri Department of Transportation right of way. A nearby private potable well was impacted by the release. However, a new well was installed and monitored. There has been no evidence the new well has been impacted since its installation.

Soil at the site was found to have concentrations of gasoline related contaminants below the Missouri Risk-Based Corrective Action Risk-Based Target Levels for residential use. Several potable wells in the community near the spill site were monitored for evidence of contamination. One well was found to have been contaminated with benzene. This well was replaced. Both the old well and the new well were monitored for several months after the well was replaced and no evidence of contamination was found in either well. No groundwater was encountered at the spill site. The department determined the site is safe for its intended use.

### **South Pier in Springfield**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the South Pier site located at 317 South Ave. in Springfield. The site is a three-story brick-exterior building with a basement and small parking lot located in a mixed-use area near downtown Springfield. The structure dates back to late 1800s. Historically, the site has been used for various small retail and commercial interests. The basement and the two upper floors were vacated in the late 1990s. The first floor remained in use as an Antique Shopping Market, until the market closed in late 2008. Contaminants included asbestos, lead-based paint, mercury-containing thermostats and exit signs containing tritium. Future use of the property will most likely include retail on the lower floors with the possibility of residential apartments on the upper floors.

All asbestos-containing materials were removed from the building in accordance with applicable regulations and the Remedial Action Plan, approved on May 1, 2008. The final report and subsequent document submissions provide sufficient verification the asbestos-containing materials abatement work was completed as approved in the Remedial Action Plan.

The lead-based paint identified in various areas of the building was removed using demolition, encapsulation, enclosure, wet-scraping and wet-sanding techniques. Some lead-based paint, located on some of the ceilings and structural columns, remains in the building in an encapsulated or enclosed form. An Operations and Maintenance Plan, used by building owners and maintenance managers for future monitoring and inspection of the remaining lead-based paint, was included in the final report. The lead-based paint Operations and Maintenance Plan has been filed in the property's chain of title with the Greene County Recorder of Deeds. The department determined the site is safe for its intended use.

In May 2008, the Missouri Department of Economic Development awarded the property owners, South Pier LLC., more than \$228,000 in Brownfield Remediation Tax Credits.

### **Regions Bank in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Regions Bank - St. Louis site, located at 3802 South Broadway in St. Louis. Regions Bank currently uses the one-acre site as a commercial and retail banking operations facility. The present building was constructed in 1924. Prior use includes a movie theatre, retail stores and a bank. A Phase I and Phase II Environmental Site Assessment and Limited Site Investigation identified a heating oil underground storage tank and associated impacted soil. The property owner, Regions Bank, applied to the program for oversight of remedial action and proper underground storage tank abandonment.

Site investigations revealed the presence of petroleum hydrocarbons in subsurface soil associated with a heating oil underground storage tank located beneath the basement slab in the building. Total petroleum hydrocarbon-diesel range organics, or TPH-DRO, was detected in soil. Groundwater was not encountered at the site to the maximum depths explored, up to about 24-feet below the ground surface.

The underground storage tank was closed in place in 2008 and the extent of contamination in surrounding soil was identified. Following identification activities, Terracon performed a Tier 1 Risk Assessment to further evaluate the concentrations of organics in soil. The Risk Assessment determined no ecological receptors would be impacted by contamination at the site. The future groundwater domestic use was incomplete due to the existence of Ordinance 66777 and the associated memorandum of understanding between the City of St. Louis and the department, and the representative concentration of organics in soil is below applicable risk-based target levels. The department determined the site is safe for its intended use.

Regions Bank will now be able to continue banking operations secure in the knowledge that employees and patrons of the bank will not be adversely affected by subsurface contamination.

### **Former Norris Property in St. Joseph**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Norris Property - former site, located at 1501 South Leonard Rd. in St. Joseph. Norris & Sons operated a solid waste transfer station on the 35-acre site from the mid-1970s to 2001. The site has a history of environmental issues dating from the 1970s that were never completely resolved. Enforcement actions were brought against Norris & Sons in the 1970s and 1980s. Leaking drums of waste were removed and contaminated ponds were drained and filled. However, complete soil and groundwater investigation was never done until American Family Mutual Insurance, located on an adjacent property, became interested in acquiring the property to expand its operations.

American Family Mutual Insurance enrolled the site in the program to address remaining environmental issues. Site investigations revealed the following:

- Chlorinated solvents, primarily tetrachloroethylene and its degradation products, were present in soil and groundwater.
- Petroleum contamination was present in soil and groundwater associated with a diesel above ground storage tank.
- More than 100 test excavations were completed to determine the extent of landfilled debris and solid waste.
- Groundwater monitoring of volatile organic compounds was conducted.

Remediation activities included:

- The excavation and off-site disposal of soil from the south and central pond areas and the transfer station area soil and groundwater to achieve Missouri Risk-Based Corrective Action Tier 1 Risk Based Target Levels for unrestricted land use on most of the site.
- Demolition and disposal of all on-site structures except the barn.
- Removal of a heating fuel oil tank at the former house.
- Closure of a shallow water well in accordance with department requirements.

A 7.5-acre tract was cleaned up to non-residential risk-based target levels due to remaining buried debris and a soil management plan was developed for the proper handling of soil. The department determined the site is safe for its intended use.

American Family Mutual Insurance has expanded its existing offices onto the Norris tract. The expansion allowed American Family to maintain its operations in the United States instead of moving overseas.

### **St. Joseph Place in Kansas City**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the St. Joseph Place site, located North of E. 10th St. between Woodland Ave. and Garfield Ave. in Kansas City. The site is approximately four acres and was developed with mostly residential buildings and a trolley car barn as early as 1896. Two high-rise units built in 1960 were located on the site. These were imploded in 1987 and the site has remained vacant since. The main contaminant identified in preliminary testing was lead in soil from the demolition and subsequent site grading.

Soil with elevated levels of lead was removed and disposed of at Deffenbaugh Landfill in Kansas. Previous testing indicated the soil was not a hazardous waste for disposal purposes. The special waste disposal receipts were included in the report. Confirmation laboratory testing of the remaining soil after excavation was done for the Resource Conservation and Recovery Act, or RCRA, 8 metals. One hot spot was found in initial confirmation testing and the area was further excavated and re-tested. Test results for both remaining soil and the fill material were within or lower than the natural background levels and therefore do not require further action. The department determined the site is safe for its intended use.

The site will be redeveloped with a residential facility by the Housing Authority of Kansas City.

### **Union City Redevelopment in Joplin**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Union City Redevelopment site, located at 501-513 S. Main in Joplin. The site is made up of several connected buildings in downtown Joplin. The buildings have been developed since approximately 1884, housing various commercial and retail businesses including Christman's Dry Goods Co. and a vaudeville theatre. Plans are to develop the buildings into a mix of residential and commercial use. Phase I and II assessments identified the presence of asbestos, lead paint, fluorescent tubes and possible polychlorinated biphenyl-containing ballasts.

Asbestos-containing material was disposed of in a sanitary landfill. Potentially hazardous waste fluorescent bulbs and ballasts were managed by recycling with the HTR Group. The lead-based paint removal was primarily done by demolishing interior partition walls and removing windows and wood trims. All windows in the buildings were replaced with new ones. Lead-based paint wall and ceiling surfaces in the 501 Main building were encapsulated with lead-blocking paint primer. The stairwell was coated with lead-block primer on all five levels. The department determined the site is safe for its intended use.

The 501 South Main Building is the former Christman's Department Store and 507-513 S. Main Street was known as the Paramount Building. Both are in the Joplin Downtown Historic District, part of the National Register of Historic Places.

The site has been authorized to receive up to \$199,257 in Brownfields Remediation Tax Credits by the Missouri Department of Economic Development. The project will create an estimated 57 jobs.

### **Park Pacific in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Park Pacific site, located at 210 North 13th St. in St. Louis. The site was first developed in the late 1800s. By 1929, Missouri Pacific Railroad completed construction of the current 22-story building, which served as its headquarters for more than 50 years. A Phase II environmental site assessment indicated the presence of lead-based paint, asbestos-containing materials, fluorescent lights and ballasts and mercury-containing thermostat controls.

Remediation activities for this site were conducted on the interior and the exterior (parking lot) of the building. Interior abatement of asbestos-containing materials and lead-based paint began in November 2007 in accordance with an approved Remedial Action Plan and continued until September 2008, when the last of the final air clearance samples were taken. Almost all asbestos-containing materials was removed from the building and properly disposed of off-site. A small area of inaccessible Thermal System Insulation pipe wrap remains on the 22nd floor behind a wall made from historic wood. Much of the loose or flaking lead-based paint on the interior was wet-scraped and coated with an approved lead-based paint encapsulant. Some lead-based paint found on non-load bearing walls was disposed of as demolition debris when those walls were removed. An Operation and Maintenance Plan was filed in the property's chain of title to provide current or future building managers the inspection procedures and schedules for the asbestos-containing materials and lead-based paint remaining in the building.

A subsurface investigation consisting of 16 discrete borings was conducted in the parking lot area in July 2006. Several soil contaminants, including lead, arsenic, polycyclic aromatic hydrocarbons and miscellaneous volatile organic compounds/semivolatile organic compounds were found to exceed Missouri Risk-Based Corrective Action criteria at various depths. Based on those sampling results, a 10-foot area of soil around three of the borings was excavated and disposed of off-site. Confirmation samples taken after the excavation confirmed concentration levels of remaining contaminants were within published background levels for St. Louis area soils. The department determined the site is safe for its intended use.

In October 2007, Parkside Towers, LLC was awarded more than \$5 million in Brownfields Remediation Tax Credits. Redevelopment plans include a mix of residential and retail spaces. A multi-story parking garage is also being considered for the eastern half of the block, which is now a vacant lot.

### **Former Sedalia Landfill**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Sedalia Landfill - former site, Former City Landfill, located in Sedalia. The City of Sedalia enrolled the .5-acre site to investigate the disposal of waste material from the former Rival plant within a corner of the 160-acre tract. A February 2008 Phase II investigation included trenching and collecting samples of the material for laboratory analysis. Samples of the material contained heavy metals at concentrations that exceed their associated Missouri Risk-Based Corrective Action Default Target Levels.

Site investigations revealed the presence of heavy metals, including arsenic, beryllium, cadmium, chromium, copper, lead, nickel, thallium, antimony, selenium and zinc in soils. After a subsurface site investigation four disposal cells were found. The remedial actions included the excavation of approximately 800 tons of waste material including soil and off-site disposal at a permitted landfill. Confirmation samples were collected and indicate the remedial effort was successful to remove the metals contamination to unrestricted use standards and within the natural background levels in the area. The department determined the site is safe for its intended use.

The City of Sedalia plans to sell the property to a potential buyer.

**KC Live Entertainment District - Block 138 in Kansas City**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the KC Live Entertainment District - Block 138 site, located at 1400 Main St., 1401 and 1415 Baltimore in Kansas City. The historic Mainstreet Theatre, later renamed the Empire Theatre, was built in 1921 as a vaudeville and movie house. After closing in the 1980s, the theatre sat vacant for more than 20 years. The site consists of a 1.36-acre continuous city block, known as Block 138, bounded by 14th Street to the north, Truman Road to the south, Main Street to the east and Baltimore Ave. to the west. In addition to the theatre, former uses of the property includes a blacksmith shop, asbestos and fire fighting supplies storage, tin shop, cleaners, garage/filling station, car dealership, car wash and surface parking lot. The city of Kansas City Planning and Development Department entered the site into the Brownfields/Voluntary Cleanup Program for investigation of hazardous substances in soil and groundwater and cleanup of asbestos and lead-based paint.

Environmental Assessments documented the presence of metals, volatile organic compounds, Total Petroleum Hydrocarbons, semi-volatile organic compounds and Polycyclic aromatic hydrocarbons and asbestos-containing material and lead-based paint in the building. Concentrations of contaminants of concern in soil and groundwater were below applicable Missouri Risk-Based Corrective Action Tier 1 Risk-Based Target Levels for Residential Land Use. The westernmost portion of Block 138 was eligible for funding under the Petroleum Storage Tank Insurance Fund. Removal and disposal of nine underground storage tanks and excavation and disposal of contaminated soil were conducted under the oversight of the department's Tanks Section.



*The KC Live entertainment District - Block 138 site will now be AMC's Entertainment's Flagship Theater.*

On Aug. 16, 2005, a water utility main break occurred at the corner of 14th and Baltimore Streets, immediately adjacent northwest of Block 138, and flooded the theatre basement. Approximately 1,054,080 gallons of accumulated water from the water main break was properly filtered for asbestos-containing materials and discharged in accordance with the Temporary Wastewater Discharge Permit from the City Water Services Department into the publicly-owned treatment works.

Approximately 3,930 cubic yards of asbestos- and mold-containing materials was removed from within the theatre and properly disposed. Approximately 150 cubic yards and an additional 200 disposal bags of asbestos-containing materials was removed from the roof of the theatre and properly disposed. Lead-based paint on items to be reused was removed and properly disposed. Remaining lead-based paint was encapsulated and an Operations and Maintenance Plan regarding proper management of the encapsulated lead-based paint was filed in the property chain-of-title. The department determined the site is safe for its intended use.

AMC Entertainment redeveloped the theatre into its flagship theatre, featuring a six-screen, all-digital movie theatre, restaurant and bar, located in the newly renovated Kansas City Power and Light District. The main entrance and ticket booth are under the signature dome, where floors were removed to reveal the full three-level interior of the rotunda. The theatre reopened in April 2009 under its original name, Mainstreet Theatre. The Missouri Department of Economic Development approved up to \$938,538 in Brownfield Redevelopment Program remediation tax credits to help offset the cleanup costs. At least 106 new jobs were estimated for the project.

### **Holliday Sand & Gravel Company, Randolph Plant #9 in Randolph**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Holliday Sand & Gravel Company, Randolph Plant #9 site, located at 7801 NE Birmingham Rd. in Randolph. The site is a 5-acre parcel of land adjacent to the Missouri River, owned by the Birmingham Levee District and leased to Holliday Sand & Gravel for barge operations. Holliday Sand & Gravel enrolled the site to investigate a reported burial of scrap metal and engine maintenance waste (oil, filters and antifreeze) in the 1980s.

Site investigations detected buried metal objects in the area where historical waste burial was thought to have occurred. Soil borings were completed and samples analyzed for petroleum products and metals to determine whether contaminated soil was present and the volume of soil requiring removal. Two-hundred and ninety four tons of petroleum-contaminated soil was excavated and disposed at a permitted landfill. Scrap metal, empty buckets and drums, timbers and miscellaneous debris were also removed. Post-remediation verification soil samples met Missouri Risk-Based Cleanup Action unrestricted, or residential, use target levels. The department determined the site is safe for its intended use.

The project required coordination with the Levee District (property owner) and approval of the plan by the district.

### **Saint Boniface Rectory in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Saint Boniface Rectory site, located at 7620 Michigan Ave, in St. Louis. The site is a two-story building located on a 2-acre parcel purchased by the St. Louis Catholic Diocese in the mid-1800s. The parcel also contains a former church and a school building. The former rectory is located between the two buildings. The buildings all date to the late 1800s/early 1900s. The first floor of the rectory was primarily used for office spaces and meeting rooms. The 2nd floor contained bedrooms and bathrooms used by priests, nuns and Diocese visitors. The area around the former rectory was

surveyed for this project. No other areas of the parcel were investigated. Suspected contaminants inside the rectory include asbestos (floor tiles, mastic, pipe insulation) and lead-based paint.

In June 2009, interior work began under an approved Remedial Action Plan. All of the asbestos-containing materials were removed from the building. Waste disposal manifests included in the final report indicate approximately 12 cubic yards of asbestos-containing materials was containerized and disposed of at an authorized landfill. Other materials, such as fluorescent bulbs and ballasts and miscellaneous cleaning supplies were either recycled or properly disposed of at the site. Lead-based paint found throughout the building was either removed as part of demolition debris from window replacements or scraped and covered with an authorized encapsulant. A lead-based paint Operations and Maintenance Plan was submitted, approved and filed in the property chain of title with the St. Louis Recorder of Deeds. The lead-based paint Operations and Maintenance plan describes in detail the location of remaining, encapsulated lead-based paint and provides inspection requirements for current and future building maintenance supervisors. The department determined the site is safe for its intended use.

In September 2008, the Missouri Department of Economic Development awarded this project more than \$111,000 in Brownfields Remedial Tax Credits to help finance this redevelopment. The owner has plans to convert the former rectory into a restaurant.

### **Downtown Furniture Emporium in St. Joseph**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Downtown Furniture Emporium site, located at 302 S. 3rd St. in St. Joseph. This property is on the national registry for historic places. The site building is believed to have been built between 1870 and 1890. Originally, it was occupied by the Clayton Paper Company. Since 1999 it has been used as a furniture store.

In June 2006, a water main adjacent to the building burst, flooding the basement. The flood waters contained petroleum, which was found to come from a previously unknown 1,000-gallon heating oil underground storage tank in a concrete vault beneath the building's loading dock. The building's basement was cleaned, the floors were capped with concrete and encapsulated with a sealant to prevent residual vapor migration. The underground storage tank was removed from under the loading dock along with contaminated soil and debris, and then the underground storage tank vault was also capped with concrete. Site characterization was conducted outside the building to determine the extent of the release outside the building. A risk assessment concluded contaminant levels in soil and groundwater did not exceed the target levels for residential use, except for one monitoring well with groundwater exceeding drinking water standards. However, quarterly monitoring showed the contamination in this well decreased to below drinking water standards and remained so for more than four quarters. The department determined the site is safe for its intended use.

The future of the building is currently unknown, but it will likely be developed for commercial and residential use.

### **D&T Cole - McCausland in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the D&T Cole - McCausland site, located at 2321 McCausland in St. Louis. The site was a quarry from 1903 until 1926. It had two railroad spurs from at least 1937 until 1955 and was apparently vacant from at least 1967 to the present. The site was filled in with material of an unknown origin. Known contaminants are metals and polycyclic aromatic hydrocarbons in soil and groundwater.

An initial site investigation showed elevated levels of arsenic, lead, and polycyclic aromatic hydrocarbons in soil and groundwater at the site. Further investigation was required to confirm this and delineate contamination at the site. A risk assessment was also conducted. The risk assessment concluded that arsenic and lead exist in soil above levels allowable for residential use. An environmental covenant was placed on the site restricting the property to non-residential use. The department determined the site is safe for its intended use.

#### **Former Hickman Burke Auto in St. Louis**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Hickman Burke Auto (former) site, located at 3100 Gravois Ave. in St. Louis. This .93-acre commercial site was developed in 1920 as the sales facility for Hickman Burke Auto. Since then the building has been used for commercial and industrial uses, such as auto sales, the John Fabick Tractor Company, PT Intermodel, Andrew's Interiors and Lockheed Manufacturing. Until recently, the building sat vacant for a period of approximately four years. H & A Restoration enrolled the site in the program to address lead-based paint and asbestos containing materials issues prior to redevelopment.

Environmental Site Assessments identified asbestos-containing materials, lead-based paint, polychlorinated biphenyl containing light ballasts and tubes and other miscellaneous hazardous materials. All identified lead-based paint was removed using either dry-ice media blasting, "peel-away" lead paint stripper, complete component removal or lead block methods to encapsulate remaining lead-based paint. Lead-based paint removed was disposed of properly as hazardous waste. An Operations and Management Plan was developed for management of encapsulated lead-based paint.

The Whippoorwill Group LLC, inspected the interiors and exteriors of the buildings to identify regulated asbestos-containing materials that would require abatement prior to renovation activities. All regulated asbestos-containing materials materials were abated by a Missouri-licensed asbestos abatement contractor.

Approximately 580 fluorescent light tubes were collected and properly disposed of or recycled prior to demolition activities. The existing mercury vapor lights were reused in the facility. Existing Freon remains in use at the building as the owner had the rooftop HVAC unit checked and brought up to code by a qualified heating and cooling company. The department determined the site is safe for its intended use.

The present owners purchased the property in October 2008 to restore the building and preserve the integrity of its historical aspects. The building will now be used as commercial office and warehouse space.

#### **Richards-Gebaur Memorial Airport - Phase I Parcel in Kansas City**

The Missouri Department of Natural Resources' Brownfields/Voluntary Cleanup Program issued a Certificate of Completion for the Richards-Gebaur Memorial Airport - Phase I site, located at 15450 Hangar Rd. in Kansas City. Richards-Gebaur was built in 1941 as an auxiliary airport for Kansas City. It was transferred to the federal government in 1953 and used as an Air Force base. The base was deactivated in 1976 and about 1,360 acres were transferred back to Kansas City. The U.S. Air Force ceased all operations in 1994. Cleanup operations were performed under the Base Realignment and Closure and Formerly Used Defense Sites programs. The site was most recently owned and managed by the Port Authority of Kansas City while cleanup was undertaken by the U.S. Air Force. The Air Force

is responsible for certain ongoing cleanup issues, but redevelopment has been able to proceed on portions of the property. The Port Authority enrolled the site in the program in 2005 and completed minor remediation projects not covered by agreements with the U.S. Air Force. The Port Authority transferred the property to CenterPoint Development, which has started redevelopment of Phase I.

This parcel includes 233 acres on the north side of the Richards-Gebaur property. It includes the “overshot area” of a former skeet range, which lies mainly on the Phase 2 parcel immediately to the south. Phase I also included a former fire training area/burn pit (Base Realignment and Closure area FT002), a septic tank site and the former 1010 Hangar and 1025 Communications buildings.

Remediation conducted on the Phase I parcel under program oversight included:

- Removal of lead shot-contaminated soil from a portion of the former skeet range known as the overshot area.
- Asbestos abatement in structures prior to demolition.
- Re-evaluation of existing Missouri Risk-based Corrective Action Standards soil sampling data to ensure previous cleanup work meets current standards.

Soil from the overshot area exceeding non-residential target levels for lead was removed and stockpiled on the main portion of the skeet range located on the Phase 2 parcel, where it will be capped to prevent exposure and erosion. A stormwater detention basin was constructed on the remediated area and the area was restricted to non-residential use through an environmental covenant. The remainder of the Phase I parcel met unrestricted use standards. The department, EPA and the U.S. Air Force previously agreed cleanup obligations under a Record of Decision were completed. The department determined the site is safe for its intended use.

The long-term redevelopment plan for the site is intermodal warehouse-distribution and other commercial uses. The completion of the Phase I parcel at Richards-Gebaur represents another step forward in a long process to bring the property from a former Air Force Base and municipal airport with environmental issues into productive reuse and redevelopment. The project is a cooperative effort between the department, the Port Authority of Kansas City, Kansas City Economic Development Corp., EPA, U.S. Air Force, Missouri Attorney General’s Office, Kansas City Southern Railroad and CenterPoint Properties of Oak Brook, IL as buyer and developer.

**Missouri Department of Natural Resources - Hazardous Waste Program  
Brownfields/Voluntary Cleanup Section**

**Sites in Brownfields/Voluntary Cleanup**

	<b>Active</b>	<b>Completed</b>	<b>Total</b>
January	321	495	816
February	318	500	818
March	309	513	822

**New Sites Received**

January

- Station G Apartments, St. Louis
- Advantage Metals Recycling LLC St. Joseph Yard, St. Joseph

February

- Joplin FMGP #1, Joplin
- Missouri Theatre Building, St. Louis
- 39th and Prospect Northwest Redevelopment Project, Kansas City

March

- Linn County Jail, Linneus
- Olive Lane & Skinker Blvd. Road Improvement, St. Louis
- Northside Development Project (St. Louis), St. Louis
- Arlington Grove, St. Louis
- ATCOM (former), St. Louis

**Sites Closed**

January

- St. Louis Steel Products Facility - Former, Hazelwood
- American Brake (former), St. Louis
- Cape Fair Spill Site, Cape Fair

February

- 2601 Industrial Drive, Jefferson City
- Norris Property (former), St. Joseph
- Regions Bank - St. Louis, St. Louis
- South Pier, Springfield
- St. Joseph Place, Kansas City

March

- KC Live Entertainment District - Block 138, Kansas City
- Lofts at Jordan Creek, Springfield
- Park Pacific, St. Louis
- Union City Redevelopment, Joplin
- Downtown Furniture Emporium, St. Joseph
- HHSL-JVL Ward 19 2008 Project-1417 Webster, St. Louis
- HHSL-JVL Ward 19 2008 Project-1421 Webster, St. Louis
- HHSL-JVL Ward 19 2008 Project-3101 Sheridan, St. Louis
- HHSL-JVL Ward 19 2008 Project-3105 Sheridan, St. Louis
- D&T Cole - McCausland, St. Louis
- Holliday Sand & Gravel Company, Randolph Plant #9, Randolph
- Saint Boniface Rectory, St. Louis
- Sedalia Landfill (former), Sedalia

**Drycleaning Environmental Response Trust Fund**

The Department of Natural Resources' Drycleaning Environmental Response Trust, or DERT, Fund provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from dry cleaning facilities. The two main sources of revenue for the fund are the dry cleaning facility annual registration surcharge and the quarterly solvent surcharge.

**Registrations**

The registration surcharges are due by April 1 of each calendar year for solvent used during the previous calendar year. The solvent surcharges are due 30 days after each quarterly reporting period.

<b>Calendar year 2009</b>	<b>Active Dry Cleaning Facilities</b>	<b>Facilities Paid</b>	<b>Facilities in Compliance</b>
Jan. - March 2010	243	124	51.03%

<b>Calendar year 2010</b>	<b>Active Solvent Suppliers</b>	<b>Facilities Paid</b>	<b>Suppliers in Compliance</b>
Jan. - March 2010	10	4	40%

**Cleanup Oversight**

<b>Calendar Year 2010</b>	<b>Active</b>	<b>Completed</b>	<b>Total</b>
Jan. - March 2010	23	8	31

**Sites Recieved**

- January
  - American Cleaners - University City, University City
- February
  - Charter Dry Cleaning, Ellisville
- March
  - Bright and Free Laundry & Dry Cleaners, St. Louis

**Sites Closed**

- January
  - VIP Cleaners, St. Peters

# Missouri Department of Natural Resources - Hazardous Waste Program

## Brownfields/Voluntary Cleanup Section

### Reimbursement Claims

The applicant may submit a reimbursement claim after all work approved in the work plan is complete and the fund project manager has reviewed and approved the final completion report for that work. The fund applicant is liable for the first \$25,000 of corrective action costs incurred.

	Received	Under Review	Paid/Processed
January	0	4	3
February	0	3	2
March	0	2	1

	Received	Under Review	Paid/Processed
January	\$0	\$42,476.24	\$20,936.74
February	\$0	\$62,669.33	\$44,863.44
March	\$0	\$54,287.70	\$40,439.70

### Reimbursement Claims Processed:

American Cleaners - Dorsett Road	Maryland Heights	\$1,165.00
American Cleaners (Southroads Shopping Center)	St. Louis	\$13,711.39
Busy Bee Laundry	Rolla	\$40,439.70
Clayton Cleaners	St. Louis	\$6,796.00
Fosters Cleaners & Shirt Laundry	Blue Springs	\$6,060.35
Kings Highway Retail Property	Sikeston	\$38,067.44

**Total reimbursements as of March 31, 2010: \$1,106,429.12**  
**DERT Fund Balance as of March 31, 2010: \$2,070,381.00**

### Inspections and Assistance

#### Regional Office Employees

- Conducted 151 hazardous waste generator compliance inspections:
  - 18 at large quantity generators.
  - 77 at small quantity generators.
  - 50 at conditionally exempt small quantity generators.
- Issued 33 Letters of Warning and six Notices of Violation requiring actions to correct violations.
- Made 35 Environmental Assistance Visits to hazardous waste facilities. 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 53 citizen concerns regarding hazardous waste.

#### Hazardous Waste Program Compliance and Enforcement staff

- Conducted 13 inspections of commercial treatment/storage/disposal facilities and one follow-up inspection of a small quantity generator.
- Conducted two focused compliance inspections at electronics recycling facilities.
- Two hazardous waste enforcement cases were referred to the Missouri Attorney General's Office.

#### Tanks Compliance and Enforcement Unit

- Continued to address noncompliance issues resulting from compliance inspections.
- The completion of this fiscal year will mark the third year of the required three-year inspection cycle mandated by the Energy Policy Act of 2005 as well as successful joint contract inspection efforts between the department and the Petroleum Storage Tank Insurance Fund. In addition to the compliance inspections, the unit continues to address the financial responsibility violations as a priority.
- Twelve facilities with financial responsibility violations were referred to the unit for enforcement action. Staff efforts during this time period resulted in 33 cases being resolved within the program and three cases with operation or permanent closure violations as well as five cases with financial responsibility violations being referred to the Attorney General's Office for legal action. The expedited referral process for the financial responsibility cases approved by the Missouri Hazardous Waste Management Commission continues to make it possible for staff to address noncompliant sites in a timelier manner, thereby reducing the number of sites without financial responsibility.

#### Polychlorinated Biphenyl Inspectors

Inspectors conducted 21 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 necessary enforcement action regarding PCBs according to the Toxic Substances Control Act.

#### Hazardous Waste Transporter Inspector

The Inspector conducted 28 commercial vehicle inspections during which three vehicles were placed out of service for mechanical safety violations. The inspector also conducted one transporter facility inspection, citing two deficiencies, which were corrected within one week of the date of the inspection. As part of the Commercial Vehicle Safety Association's protocol, the department sends the reports to the Missouri State Highway Patrol. The transporter must certify to the patrol the violations were corrected.

As of March 2010, there are 231 licensed hazardous waste transporters in Missouri.

### **Agro Distribution in Caruthersville**

The Missouri Department of Natural Resources and Attorney General's Office have signed a settlement agreement with Agro Distribution to resolve violations of the Missouri Hazardous Waste Management Law and Regulations. Major violations were cited at the facility. The settlement agreement includes a total penalty of \$26,400 paid by Agro Distribution to the Pemiscot County School Fund.

Agro Distribution is a distributor and marketer of crop nutrients, crop protection products, seed and related technical services. The department discovered hazardous material description discrepancies during a routine review of Agro Distribution's hazardous waste shipment and disposal records. During a follow-up inspection, the department determined Agro Distribution had previously hired a contractor to characterize and transport its waste for disposal. However, the contractor mismanaged some of the waste, and as a result, Agro Distribution incurred 17 violations of the Hazardous Waste Management Law and Regulations. These violations include but are not limited to:

- Failure to register with the department as a hazardous waste generator.
- Failure to make hazardous waste determinations on more than 600 gallons of toxic waste.
- Storing hazardous waste without a permit.

With department direction and oversight, Agro Distribution hired a new contractor and corrected all violations.

### **AEROFIL Technologies Incorporated in Sullivan**

On March 25, Aerofil Technologies in Sullivan was referred to the Attorney General's Office. In 2009, the St. Louis Regional Office tried to work with the facility for months to persuade it to remedy deficiencies in the hazardous waste storage tank system. The facility stopped being responsive. The regional office conducted a follow-up inspection to assess hazardous waste compliance and issued a Notice of Violation to Aerofil. The case was referred to the Hazardous Waste Program for enforcement action. Because achieving compliance may take a long time, this facility has been referred to the Attorney General's Office to develop an enforceable agreement, as well as to pursue penalties. Aside from the tank system deficiencies, it appears Aerofil has corrected all other hazardous waste violations.

### **Solvent Recovery Corporation in Kansas City**

A settlement with Solvent Recovery Corporation in Kansas City was finalized on Jan. 4, for \$1,200 for failure to properly mark and label three containers of hazardous waste in storage and failure to ship or dispose of six containers of hazardous waste within one year of being placed in storage. The facility had corrected the violations by the end of the two-day inspection.

### **TRI-State Fertilizer Inc. in Canton**

Tri-State Fertilizer Inc. in Canton was referred to the Attorney General's Office on Feb. 24 for the following hazardous waste violations:

- Failure to identify hazardous waste.
- Failure to mark and label hazardous waste containers.
- Failure to keep containers properly closed.

This referral adds to the existing Water Pollution Control Program case and Tri-State's failure to comply with the court order on that case. The facility has not been operating for many years and some materials on-site, which were formerly used in the fertilizer business, are toxic for selenium and 2, 4-D and are in an essentially abandoned condition. The department requested the Attorney General's Office pursue speedy disposal of these hazardous wastes in compliance with the laws and regulations.

**Jack Hale Property in High Ridge**

A settlement agreement with Jack Hale for property in High Ridge was finalized on March 12 for \$3,600 for failure to identify hazardous waste, storing hazardous waste beyond the time allowed and failure to meet all requirements for storage. Jack Hale was the landlord who sold his business to a new owner. There was miscommunication with the new owner regarding who had responsibility for chemicals and paint from his business and Hale did not dispose of his waste in a timely manner.

**New Listserv Postings**

For the past quarter, the Enforcement and Compliance Assistance Listserv for Hazardous Waste Generators is continuing its topic of Missouri-specific regulations. It is vital to inform Missouri generators about the unique regulations that apply to them. The listserv is the ideal forum for this type of outreach. Over the past three months, topics included:

- Requirements for storing 1,000 kgs of liquid hazardous waste.
- Containment systems.
- Inspections of containment systems.
- Allowable vapor pressure of hazardous waste in open tanks.
- When generators should fill out an exception report.
- How long hazardous waste summary reports should be kept.

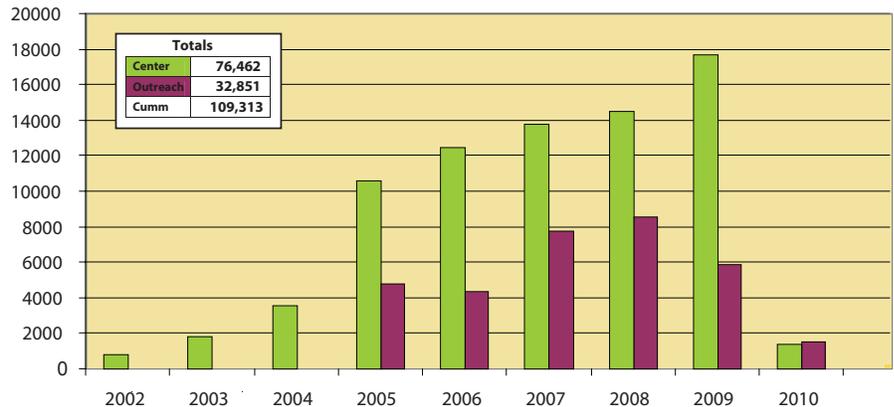
The listserv also provided readers with two new checklists the Compliance and Enforcement Section had developed:

- The Small Quantity Generator Supplemental Inspection Checklist helps small quantity generators who store 1,000 kilograms (2,200 lbs) or more of hazardous waste to identify the extra requirements they must meet in Missouri, such as having a personnel training plan and a contingency plan.
- The Electronic Scrap Recycler Inspection Checklist is for businesses that recycle electronics.

**Department of Energy’s Weldon Spring Site – Updates and Upgrades  
 Interpretive Center**

The Weldon Spring Site Interpretive Center represents a window to the past and the U.S. Department of Energy’s commitment to the future through long-term surveillance and maintenance of the Weldon Spring Site along with a strong community partnership. The center, dedicated on Aug. 5, 2002, houses exhibits that present a photographic history of the Weldon Spring area, the towns that once occupied this area and the site’s historical contributions. The exhibits detail progression of the site cleanup process, shows construction of the 45-acre disposal cell and communicates the legacy of the site to current and future generations. Educational and outreach programs, tours, research and volunteer opportunities are provided by the center. Since opening, the center has entertained 76,462 visitors and provided outreach opportunities to 32,851 students and adults. A total of 109,313 people have learned about the area through educational and outreach opportunities.

**Weldon Spring Interpretive Center  
 Center vs. Outreach  
 2002-2010 YTD**



Adjacent to the center is the 75-foot-high Weldon Spring Disposal Cell. A viewing platform on top of the cell offers a panoramic view of St. Charles County and the surrounding Howell Prairie. The 8-mile Hamburg Trail on the site links to the wildlife center at the August A. Busch Memorial Conservation Area and the historic Katy Trail State Park, a bicycle and pedestrian trail that stretches almost 200 miles across the state along the Missouri River.

On March 17, Missouri Department of Natural Resource staff provided input and suggestions into the proposed updates at the Weldon Spring Interpretive Center. There is a planned “Regulator Corner” that may have a Weldon Spring video created by department staff. Department staff asked to review verbiage of a few sections being updated, including the “Howell Prairie” section and the “Long-Term Surveillance and Maintenance” section, since the department has played an active role in these initiatives. Finally, the Department of Energy is adding a new section about “Renewable Energy” and the the department’s Division of Energy may be able to assist with information specifically about Missouri and its efforts towards renewable energy.



## **Hematite Radioactive Site**

### **Hematite Radioactive Site Decommissioning Plan**

The U.S. Nuclear Regulatory Commission is completing its review of the Decommissioning Plan for the Hematite site prepared by Westinghouse Electric Company. This plan defines aspects of the site cleanup related to radionuclide contamination. The Nuclear Regulatory Commission expects to complete the review of the plan by early fall 2010. The removal of contaminated soils, sediments and buried waste will begin shortly thereafter. The Department of Natural Resources and the Missouri Department of Health and Senior Services have been reviewing the plan and supporting documentation to present comments and questions to Nuclear Regulatory Commission in a timely manner.

### **Residential Well Sampling**

The Missouri Department of Health and Senior Services and the Department of Natural Resources are working together on sampling of residential water supply wells within the vicinity of the project. One round of sampling, consisting of seven homes, was completed and analysis is being conducted at the time of the writing of this report. A second round will be conducted in the near future, if there is interest from the homeowners. There is no cost to the homeowners regarding this effort.

The state does not expect to see any contamination related to the site because wells impacted by contamination have been taken out of service and a network of monitoring wells are in-place to track potential movement of the plume. However, this sampling event was deemed a useful precaution similar to sampling events completed in the past.

### **Site Status**

The following is a list of actions recently completed or in the works for the Hematite Site.

#### **Railspur and Loadout Pad Construction**

This was completed, however further changes will have to be made to satisfy railroad specifications for equipment used to weigh railcars. This will be completed by December 2010.

#### **Waste Water Treatment System Construction**

This system will be used to prepare water collected in excavations or in contaminated soil staging areas for discharge. Much of the components have arrived on-site and the facility will soon apply to the department for permit to construct.

#### **Haul Road And Clean Soil Staging Pad Construction**

Westinghouse has prepared plans for grubbing areas to be used in the staging of soil brought to the site for use as post-cleanup backfill. They will also be bringing in gravel to construct haul roads for moving clean and contaminated soil around the property. They will soon be submitting these plans to the department for review.



*Different views of the same buildings that are scheduled to be demolished before the end of the year. Westinghouse is currently preparing these buildings by sampling/removing contents and obstructions.*

**Fuel Pellet Fabrication Buildings (Processing Buildings) Demolition**

Westinghouse is now working on the removal of obstructions from within the building and the identification of wastes for eventual demolition. They wish to begin demolition efforts in June 2010; however the shipment of the bulk of the resulting waste to a disposal facility will not be possible until December due to rail modifications being needed. Westinghouse will be expected to submit plans and procedures related to the stockpiling of the materials and the determination of precautions needed related to dust and stormwater control.

**Soil Treatment Plans/Permit Applications**

During the summer 2010, the department expects Westinghouse to submit design documents and permitting application information related to the on-site treatment of soils impacted by volatile organic compounds. This review will require support from various sections and programs within the department including the Federal Facilities section and the RCRA section, both part of the Hazardous Waste Program, the Air Pollution Control Program and the Water Pollution Control Program.

## **2009 - A Year in Review**

Each year the Permits Section coordinates with the Environmental Protection Agency, or EPA, to prioritize activities at facilities subject to the section's oversight. General activity goals for the section and EPA are jointly negotiated and listed in the Performance Partnership Grant Work Plan. Specific outputs for the section and EPA under the plan are contained in a related document called the Multi-Year Facility Planning Strategy. These documents guide the section in planning activities and resources for the current and future federal fiscal years.

The section and EPA Multi-Year Planning Strategy is an "idealized" document that includes goals to accomplish if all staff positions are filled to do the work and all projects go relatively smoothly. The strategy is a "living" document. Projected completion task and project dates are routinely updated for a variety of reasons, such as staff turnover and resources, facility bankruptcy, permit appeals, corrective action dispute resolution, investigation findings leading to additional work, public comments and intervening short-term priorities. The section provides EPA with an explanation of the section's updated goals and routinely coordinates the new completion dates with EPA.

At the end of each federal fiscal year addressed by the work plans, the section reports to EPA about all planned and unplanned activities accomplished during the year. The report to EPA focuses primarily on permitting, corrective action and groundwater inspection evaluation activities. The following information was taken from the 2009 federal fiscal year report to EPA.

### **Federal Fiscal Year 2009 Hazardous Waste Permitting Activities**

The section coordinates, both internally and with EPA, on the priority of individual projects and tasks as dictated by the National Corrective Action Prioritization System, or NCAPS, and Overall Priority Ranking System, or OPRS, ranking for each facility, as well as goals established by the federal Government Performance and Results Act, or GPRA, of 1993. Facility rankings are periodically revised to reflect current environmental and State/EPA project priorities. During 2009, the section did not adjust any facility rankings, but did adjust certain priorities in response to the performance and results goals.

During federal fiscal year 2009, the section completed the following permitting-related activities:

- Two permit renewals: Exide Technologies (operation/post-closure/corrective action) and GETS Global Signaling (post-closure/corrective action).
- 18 Class 1 permit modifications without prior director approval.
- Eight Class 1 permit modifications with prior director approval.
- One Class 2 permit modification.
- Three Class 3 permit modifications.

### **Federal Fiscal Year 2009 Corrective Action Activities**

During federal fiscal year 2009, the section made progress on many corrective action activities related to site investigation, monitoring and remediation. These activities are too numerous to list here in their entirety, but following are some of the highlights.

The section completed Environmental Indicator evaluations for the Missouri University of Science & Technology and Nestle Purina Petcare Co. facilities. EPA and the states developed the Environmental Indicator evaluation process jointly as a way to demonstrate progress in protecting human health and the environment and meet the performance and results objectives. The two environmental indicators are called "Current Human Exposures Under Control" and "Migration of Contaminated Groundwater Under Control." These measures evaluate current environmental conditions and assess whether people are currently being exposed to environmental contamination at unacceptable levels, and whether any existing plumes of contaminated groundwater are expanding, stable or shrinking.

In the cases of the Missouri University of Science & Technology and Nestle Purina Petcare Co. facilities, human exposures and groundwater migration were determined to be under control. More information concerning the Environmental Indicator evaluations is available in the September 2007 Hazardous Waste Management Commission Report, located online at [www.dnr.mo.gov/env/hwp/commission/docs/hwmc-qt-rpt-2007-4th.pdf](http://www.dnr.mo.gov/env/hwp/commission/docs/hwmc-qt-rpt-2007-4th.pdf).

Final remedy construction, another performance and results goal, was completed at the Norledge Area at the BP/Amoco facility in Sugar Creek. While not completed during federal fiscal year 2009, four final remedy decisions are scheduled for the near future at the following locations:

- Ashland - St. Louis.
- Lower Refinery Area at BP/Amoco in Sugar Creek.
- River Cement in Festus.
- Solutia J. F. Queeny in St. Louis.

Also, while not completed during federal fiscal year 2009, five final remedy construction goals are scheduled for the near future at the following locations:

- Ashland - St. Louis.
- American Airlines in Kansas City.
- Crawford/Sugar Creek Areas at BP/Amoco in Sugar Creek.
- Beazer - East in Kansas City.
- SECO Products in Washington.

In coordination with the states, EPA recently developed the Ready for Anticipated Use determination to demonstrate environmental progress at facilities. During federal fiscal year 2009, the section completed affirmative Ready for Anticipated Use determinations for the following locations:

- Alcolac/Rhodia in Sedalia.
- Louisiana Steel in Louisiana.
- Missouri University of Science and Technology in Rolla.
- Union Pacific Railroad/RCL Wiring in Sedalia.

EPA requested the section incorporate Ready for Anticipated Use documentation preparation goals in the current Performance Partnership Grant Agreement and the Multi-Year Facility Planning Strategy. Ready for Anticipated Uses were added to the Performance Partnership Grant Agreement but not the Multi-Year Facility Planning Strategy. The section continues to track Ready for Anticipated Use status and prepare Ready for Anticipated Use documentation for facilities during the corrective action process, but does not plan to make this an independent goal in the Multi-Year Facility Planning Strategy. As with many other recent EPA initiatives, the Ready for Anticipated Use determinations are essentially an unfunded federal mandate. We continue to seek additional federal funding to address such mandates as they arise.

### **Federal Fiscal Year 2009 Groundwater Activities**

As part of the Performance Partnership Grant Work Plan, the state is obligated by its EPA hazardous waste program authorization to conduct periodic groundwater evaluations at selected hazardous waste facilities, primarily facilities with active and closed land disposal units such as landfills and surface impoundments, where groundwater contamination is present or needs to be monitored to detect releases. These evaluations come in two forms, the Comprehensive Groundwater Monitoring Evaluation, or CME, and the Operation & Maintenance, or O&M, inspection. The evaluation is an overarching

evaluation of the facility's groundwater monitoring systems and programs. The inspection is more focused and examines groundwater sampling plans, procedures and monitoring well maintenance issues. In each case, compliance with the applicable groundwater monitoring regulations and permit conditions is assessed. The section coordinates these evaluations with the department's Division of Geology and Land Survey and the Environmental Services Program. Each evaluation includes the collection of split samples to compare and verify the results of samples collected and analyzed by the facility.

Five inspection reports are typically scheduled for each federal fiscal year. During federal fiscal year 2009, the section completed four inspection reports originally scheduled for federal fiscal year 2008 and three 2009 reports. The two remaining 2009 reports will be completed during 2010. The section has been trying to delegate more of these tasks to the Division of Geology and Land Survey.

In addition to inspection reports and evaluations, the section routinely performs a detailed review of groundwater reports submitted by the facilities, using comprehensive internal checklists. These reviews identify both minor and potentially significant shortcomings with report content or project issues. Since there has been a long history of these reviews and feedback to facilities, most of the shortcomings from current reviews are minor and are handled by including the findings into the facility's next inspection report or evaluation. We send significant issues that might influence the representative nature of samples or data, regulatory compliance or otherwise affect project progress to the facility when discovered, rather than waiting until the next inspection report or evaluations. Regulatory compliance issues are of major concern and handled promptly. During the 2009 reporting period, the section completed 46 groundwater report reviews.

### **Data Management Activities**

The section tracks, both internally and externally, all section activities and accomplishments. Internal tracking is done through the section's Master Task List database and the Division of Environmental Quality's Permit Action Management System, or PAMS, database. External tracking is done through EPA's Resource Conservation and Recovery Act Information, or RCRAInfo, database. The section enters permitting, corrective action, financial assurance, inspection, enforcement and GIS information into database for all state- and joint-lead activities. The section negotiates external data entry obligations with EPA and outlines them in the Performance Partnership Grant Work Plan. The section typically enters internal and external data as soon as a milestone or goal is achieved, but in no case more than 30 days after the event has occurred or documentation regarding the event is received. As new entries are made into the database, the section assesses the accuracy of historical state and EPA data. The section corrects the information as appropriate for State and joint database entries and forwards potential corrections to EPA's database entries to EPA's Missouri State Coordinator for reconciliation.

During federal fiscal year 2009, EPA launched RCRAInfo GIS and financial assurance modules. The section used an intern to research acreage information for 69 selected facilities. The section successfully entered the acreage information into the RCRAInfo GIS module for all facilities according to the Performance Partnership Grant Work Plan. The section was also required to enter mandatory financial assurance information for 40 percent of Missouri facilities by the end of federal fiscal year 2009. The section exceeded this goal by entering 100 percent of the financial assurance information required for Missouri facilities.

### Other Activities

The section uses the Multi-Year Facility Planning Strategy process to identify and prioritize major tasks associated with individual projects. The Multi-Year Facility Planning Strategy document does not capture “unplanned” activities or specifically include incremental or phased work done in support of the listed Multi-Year Facility Planning Strategy goals. The section reports those activities to EPA separately to show incremental progress towards the broader Multi-Year Facility Planning Strategy goals. In some cases, unplanned work is substituted in support of federal grant requirements for formal Multi-Year Facility Planning Strategy goals that could not be completed as planned.

Unplanned activities include such things as facility-proposed interim measures, newly-identified Solid Waste Management Unit and Area of Concern investigations, ongoing involvement in national permitting and corrective action initiatives, permit modifications, state resource recovery certification and modification activities and facilities accepted into the expedited corrective action program. The section sends separate reports to EPA about activities related to standard and special conditions found in permits, orders or other agreements not reasonably predicted at the time the Multi-Year Facility Planning Strategy was developed.

During federal fiscal year 2009, the section spent a considerable amount of time working on issues related to facility bankruptcies, including preparing cost estimates in support of bankruptcy claims and developing agreements with facilities to perform post-bankruptcy activities using funds recovered as part of bankruptcies. The section gave a lot of attention to the following bankruptcy issues during fiscal year 2009:

- Tronox.
- Asarco (Doe Run) Glover.
- General Motors.
- Chrysler.

In addition, principal responsible party funding issues at Bob’s Home Service, idling of operations at the Holcim/Geocycle facility and other similar issues related to the economic downturn consumed a large amount of the section’s time during federal fiscal year 2009.

During federal fiscal year 2009, the section filled three full-time engineering positions and had one full time engineering position become vacant, for a net gain of two engineering positions. At the end of federal fiscal year 2009, the section lost one of its vacant engineering positions and the plan to fill the remaining engineering vacancy in flux due to funding issues.

Current plans are underway to update the Multi-Year Facility Planning Strategy again. The section discussed the Multi-Year Facility Planning Strategy and performance and results goals for 2010 and future federal fiscal years with EPA in June and September 2009. The section finalized a revised Multi-Year Facility Planning Strategy on Sept. 30, 2009 and sent it to EPA on Oct. 2, 2009. The plan is to have the updates completed by the end of June 2010.

## Northwest Missouri Environmental Investigation

It has been a little more than a year since the Missouri Department of Natural Resources and the U.S. Environmental Protection Agency, with assistance from the Missouri Department of Health and Senior Services and the Agency for Toxic Substances and Disease Registry opened a cooperative investigation into the tannery sludge issue in northwest Missouri. The government investigation was launched in response to public concerns about a St. Joseph leather tannery's distribution of waste sludge for use as agricultural fertilizer on northwest Missouri farms, and whether the sludge material contained hexavalent chromium that might pose health risks to the public.

EPA and the Missouri Department of Health and Senior Services calculated a screening level of 86 parts per million, or ppm, for hexavalent chromium in agricultural field soils and a screening level of 2 ppm for hexavalent chromium in residential yards. The Department of Health and Senior Services provided the Department of Natural Resources with a 0.3 parts per billion, or ppb, screening level for hexavalent chromium in drinking water. The different screening levels are due in part to different levels of exposure that would occur.

The full account of the department's efforts in northwest Missouri is available on the department's website at [dnr.mo.gov/env/hwp/sw-sampling.htm](http://dnr.mo.gov/env/hwp/sw-sampling.htm). This page is regularly updated with results from sampling efforts as well as links to other related investigations.

### January Sampling

The department collected 570 discrete soil samples from farm fields in Andrew, Buchanan, Clinton and DeKalb counties in January 2010. Approximately half of the samples collected were analyzed for total chromium, and then all of the samples were further processed and combined to form composite samples representing the sampled areas.



*Superfund staff collected hundreds of soil samples from northwest Missouri farm fields.*



*Soil Samples from Northwest Missouri are prepared for further analysis.*

A total of 76 composite samples from the farm fields were shipped to the contract lab for hexavalent chromium and other related analyses. Partial results were received from the laboratory on March 8, and are undergoing statistical analysis and quality assurance review. Preliminary results showed nothing above 5 parts per million, although the samples are currently undergoing an uncertainty analysis, which is expected to increase the levels, although it is not currently known by how much.

The department collected approximately 50 composite soil samples from the residential yards. These samples were further processed and combined resulting in 60 samples that were also shipped to the contract lab for hexavalent chromium analysis. Results received March 4 are undergoing statistical analysis and quality assurance review. Preliminary results showed no levels above 1 part per million.

One private well sampled during a December sampling event was right at the screening level. This well was re-sampled at the same time the other samples were taken and was also sent to the contract lab for analysis. Results were received Feb. 3, 2010. These results together with the previous private well results are undergoing statistical analysis and quality assurance review.

Department staff returned to northwest Missouri in April to take residential yard and agricultural field quality control soil samples. Soil samples from four non-sludge applied fields and three residential yards were also collected to help determine the background levels of hexavalent chromium. The results of all sampling events, now undergoing statistical analysis and quality assurance review, will determine what, if any, additional sampling will be necessary.

Hazardous Waste Program staff, along with other state and federal agencies are planning on holding a public meeting and public availability session to share all testing results with area residents. No date has been set.

### **Compass Plaza Well TCE Site Investigation**

In March, the Missouri Department of Natural Resources' Public Drinking Water Branch found trichloroethylene, or TCE, in two non-community wells and one irrigation well on the western edge of Rogersville. The department immediately began an inquiry into the source and extent of the solvent. Trichloroethylene is a nonflammable colorless liquid used mainly as a solvent to remove grease from metal parts, but it is also an ingredient in adhesives, paint removers, typewriter correction fluids and spot removers. In concentrated form it has a somewhat sweet odor and a sweet, burning taste, but it would be unlikely that such characteristics would be noticed in water with contamination. Long-term exposure to low levels of the solvent may increase the risk of certain health effects.

### **Well Sampling**

The department has sampled 63 wells southwest of Rogersville since the investigation started. Trichloroethylene, has been present in 11 of the 63 wells sampled to date. Five of the 11 wells have levels in excess of the federal drinking water standards.

The department notified residents whose water comes from those wells. The department continues to monitor the drinking water at the Logan-Rogersville primary, middle and high schools and Rogersville's two municipal wells. To date, none of these wells have shown contamination. Sampling in other wells in the area is ongoing.

The department, along with other city, county, state and federal agencies held a public meeting in Rogersville May 25 to discuss sampling and future activities. This meeting occurred after the deadline for the quarterly report for any information on the meeting to be included.

The department will continue to work with the city of Rogersville, county officials in both Webster and Greene counties and the Missouri Department of Health and Senior Services to understand better the extent of contamination in the groundwater in west areas of Rogersville. For more information, visit the department's website at [www.dnr.mo.gov/env/hwp/sfund/rogersville.htm](http://www.dnr.mo.gov/env/hwp/sfund/rogersville.htm).

## American Recovery and Reinvestment Act Underground Storage Tank Projects

The Missouri Department of Natural Resources received \$3.254 million from the Environmental Protection Agency to assess and clean up contamination released from federally regulated underground storage tanks, or USTs. This money was received as part of the American Recovery and Reinvestment Act of 2009.

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

### Former UST Site, 4067 Delmar, in St. Louis

The St. Louis Development Corporation previously conducted a Phase I Environmental site assessment at the site that identified the former use of three underground storage tanks at this facility. The St. Louis Development Corporation met with department officials and requested this site receive additional investigation and cleanup as an abandoned gas station under the American Recovery and Reinvestment Act Underground Storage Tank Project.

In January 2009, a contractor under the supervision of the Missouri Department of Natural Resources began investigation work at the former tank site located at 4067 Delmar in St. Louis. The investigation work consisted of a ground penetrating radar/metal detector survey, the advancement of several soils borings, soil and groundwater sampling and laboratory analysis.

The former tanks were not found. The analytical data collected indicated soil and groundwater petroleum contamination does not pose an unacceptable risk to human health and the environment and is available for residential or non-residential use. The department issued a no further remedial action letter for this project.

Sites like this one can sit vacant for years due to the perception of contamination from the former gasoline station. This project removed that perception and determined the property is clean. Since no contamination was discovered at this site, the City of St. Louis is exploring a residential use of the property. Most of the surrounding properties are residential.

Total Recovery Act Investment: \$6,256.17



4067 Delmar, St. Louis



4067 Delmar, St. Louis



Tanks Section chief Ken Koon, center presents a No Further Remedial Action Letter to St. Louis Development Corporation's Deputy Director Otis Williams, left, and engineer project manager Chad Howell.

# Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

## Tanks Section

### Former MK&O Coach Lines, 1428 North 13th Street In St. Louis

Information in the department's files indicated that the MK&O Coach Lines site located at 1428 North 13th St. in St. Louis formerly contained one 8,000 gallon diesel underground storage tank. The department became aware of this site and inquired of the owners about participation in the American Recovery and Reinvestment Act Underground Storage Tank Project, to which the owners agreed. The site is currently being used as a Domino's Pizza Carry Out facility.

In January 2009, a contractor under the supervision of the Missouri Department of Natural Resources, began investigation work at the site.

The objective of the project was to determine if any contamination was present at the site, and if so, where there any risks to the current use of the property as non-residential. The investigation work consisted of the advancement of several soils borings and soil and groundwater sampling.

The analytical data collected indicated soil and groundwater petroleum contamination did not pose an unacceptable risk to human health and the environment and the site is available for residential or non-residential use. The department has issued a no further remedial action letter for this cleanup project.

Total Recovery Act Investment: \$6,726.75



*Tanks Section chief Ken Koon presents a No Further Remedial Action Letter for the Former MK&O Coach Lines*

### Underground Storage Tank Financial Responsibility Update

The Missouri Department of Natural Resources began an initiative a little more than a year ago to ensure underground storage tank facilities did not operate without financial responsibility. The department initiated a new procedure for ensuring facilities that had not demonstrated adequate financial responsibility would be quickly referred for enforcement and to the Attorney General's Office to compel compliance. The process now takes place within 60 days.

The department has less than 70 out of approximately 3,600 sites out of compliance as of April 1, 2010. This means the percent of compliance is at 98 percent, which is the highest it has ever been. Recent economic downturns seem to have caused many facilities to close operations. This is likely to have added to non-compliance figures, but the biggest impact is attributable to implementation of the new Financial Responsibility Tracking Process.

Since implementing the new procedure, the number of facilities without Financial Responsibility on their underground storage tanks has decreased by nearly 2 percent. The previous process of notifying sites was about 96 percent successful; however that remaining four percent represents a large number of sites when considering they were operating with the potential to cause environmental damage while not possessing the proper resources to provide a necessary cleanup.

This new streamlined procedure ensures non-compliant facilities are addressed consistently and in a timely manner. First, the batch letters are getting to facility owners a couple weeks before the Petroleum Storage Tank Insurance Fund renewal packet and serves as a fresh reminder for tank owners and operators to make appointments for tightness testing and obtaining their deductible letter. Second, sites are receiving Notices of Violations as soon as the department knows the policy lapsed, allowing only a 15-day response time. Third, the Compliance and Enforcement Sections' conference, conciliation and persuasion time frame has been reduced to 15 days rather than the considerable amount of time given previously. Upon referral, the Attorney General's Office has continued its efforts to address these sites in a timely fashion as well.

**Petroleum Storage  
Tanks Regulation  
March 2010**

<b>Staff Productivity</b>	<b>Jul-09</b>	<b>Aug-09</b>	<b>Sep-09</b>	<b>Oct-09</b>	<b>Nov-09</b>	<b>Dec-09</b>	<b>Jan-10</b>	<b>Feb-10</b>	<b>Mar-10</b>	<b>Apr-10</b>	<b>May-10</b>	<b>Jun-10</b>	<b>TOTAL</b>
Documents received for review	236	234	208	261	190	216	210	190	227	0	0	0	1,972
Remediation documents processed	270	204	220	172	213	224	177	203	202	0	0	0	1,885
Closure reports processed	18	9	16	20	14	14	9	20	6	0	0	0	126
Closure notices approved	10	6	19	15	9	13	10	20	10	0	0	0	112
Tank installation notices received	1	7	4	2	4	4	4	3	6	0	0	0	35
New site registrations	4	8	2	3	2	6	3	3	3	0	0	0	34
<b>Facility Data</b>													
Total active and closed USTs	39,908	39,922	39,940	39,956	39,970	39,976	39,997	40,031	40,049	0	0	0	
Total permanently closed USTs	30,147	30,170	30,206	30,254	30,268	30,299	30,335	30,368	30,392	0	0	0	
USTs active and temporarily closed	9,702	9,692	9,672	9,646	9,642	9,635	9,623	9,621	9,609	0	0	0	
USTs in temporary closure	979	961	946	952	963	949	945	973	974	0	0	0	
Total hazardous substance USTs	393	395	395	395	395	395	395	395	395	0	0	0	
Facilities with active USTs	3,664	3,662	3,656	3,644	3,640	3,634	3,629	3,629	3,630	0	0	0	

**Closures**

<b>Underground Storage Tanks</b>	<b>Jul-09</b>	<b>Aug-09</b>	<b>Sep-09</b>	<b>Oct-09</b>	<b>Nov-09</b>	<b>Dec-09</b>	<b>Jan-10</b>	<b>Feb-10</b>	<b>Mar-10</b>	<b>Apr-10</b>	<b>May-10</b>	<b>Jun-10</b>	<b>TOTAL</b>	<b>All Yrs</b>
Closure Reports Reviewed	18	9	16	20	14	14	9	20	6	0	0	0	126	
Closure Notices Approved	10	6	19	15	9	13	10	20	10	0	0	0	112	
Number of Tanks Closed (Closure NFA)	48	24	52	46	27	25	28	18	27	0	0	0	295	

**Cleanup**

<b>Underground Storage Tanks</b>	<b>Jul-09</b>	<b>Aug-09</b>	<b>Sep-09</b>	<b>Oct-09</b>	<b>Nov-09</b>	<b>Dec-09</b>	<b>Jan-10</b>	<b>Feb-10</b>	<b>Mar-10</b>	<b>Apr-10</b>	<b>May-10</b>	<b>Jun-10</b>	<b>TOTAL</b>	<b>All Yrs</b>
UST release files opened this month	3	5	5	6	6	10	4	3	0	0	0	0	42	6,200
UST cleanups completed this month	18	13	17	10	10	8	10	7	16	0	0	0	109	5,255
Ongoing UST cleanups	994	988	972	968	960	959	964	961	944	0	0	0		
<b>Aboveground Storage Tanks</b>														
AST release files opened this month	1	2	1	2	0	0	1	0	1	0	0	0	8	435
AST cleanups completed this month	4	3	3	2	1	1	2	0	1	0	0	0	17	267
Ongoing AST cleanups	169	169	165	165	164	164	167	168	168	0	0	0		
<b>Both UST and AST</b>														
Total release files-both UST & AST	0	1	0	0	0	0	0	0	0	0	0	0	1	68
Cleanups completed-both UST & AST	0	0	1	0	0	1	0	0	2	0	0	0	4	42
Ongoing cleanups-both UST & AST	29	29	28	28	28	27	27	27	26	0	0	0		
<b>Unknown Source</b>														
Total release files-unknown source	2	2	4	4	1	6	3	22	10	0	0	0	54	321
Cleanups completed-unknown source	1	1	2	1	2	3	0	3	2	0	0	0	15	164
Ongoing cleanups-unknown source	141	145	150	151	147	143	134	150	157	0	0	0		
<b>Documents Processed</b>	270	204	220	172	213	224	177	203	202	0	0	0	1,885	
<b>*Reopened Remediation Cases</b>	0	0	1	0	0	0	0	0	0	0	0	0	1	78

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.