

Hazardous Waste Management Commission Report

July - September 2016

Quarterly Report



Hazardous Waste Management Commissioners

Elizabeth Aull, Chair
James "Jamie" Frakes, Vice Chair
Charles "Eddie" Adams
Michael Foresman
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"The goal of the Hazardous Waste Program is to protect human health and the environment from threats posed by hazardous waste."

For more information:

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Hazardous Waste Program

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Past issues of the Hazardous Waste Management Commission Report are available online at dnr.mo.gov/env/hwp/commission/quarterlyreport.htm.



Missouri Department of Natural Resources
Hazardous Waste Program

Letter from the Director

Dear Commissioners:

This edition of the quarterly covers the third quarter of the year from July 1st through Sept. 30th. These are some of our most active months as staff travel throughout the state performing site inspections, sampling events, assistance visits, etc.

Many of our program staff sponsored, attended and participated in the Missouri Waste Control Coalition (MWCC) Conference at Tan-Tar-A in July. This annual conference brings together citizens, government, business and industry to discuss the rapidly changing field of waste management. Brownfield/Voluntary Cleanup Program (BVCP) staff held sessions both days of the conference providing information to municipalities on a variety of brownfield issues and brownfield grant opportunities available to assist with cleanups in their areas. Tanks section staff also held sessions on plume stability, light non-aqueous phase liquid (LNAPL), performance based contracts and a training session on the new underground storage tank (UST) rules. These types of conferences are extremely beneficial to stakeholders and the department as it provides a forum for interaction on issues faced in Missouri.

With the final 2016 pesticide collection having been held in June, staff is moving forward with developing the calendar of events for the 2017 pesticide collections. Using lessons learned from each event, we strive to make the most efficient use of funding, while ensuring events are distributed throughout the state.

Program staff continues working diligently to amend the UST rules, with these proposed amendments having been published in the Sept. 15, 2016, *Missouri Register*. Following the comment period on these proposed rule changes, staff will present testimony to the commission at a public hearing during the October meeting. Following this public hearing, we anticipate coming to you at the December meeting for a vote on our proposed changes.

With the passage of the legislation in 2012, staff has also been working on the statutorily required five year review of rules. Every five years, a notice is published, opening up all rules to a 60 day comment period; whereas all state agencies must do a review of each rule, noting if it is necessary, continues to be necessary, is obsolete, overlaps other rules or has other conflicts. This process will allow us to clean up outdated references, etc., in the "No Stricter Than" rules. We are responsible for filing a report with the Joint Committee on Administrative Rules by June 30, 2017.

I continue looking forward to working with the commission as we work through each of the issues brought before you. I want to share that you should be proud of the work being done by this commission and for your continued service to the state of Missouri.

Sincerely,



Steve Sturgess
Director

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Fiscal Year 2017 Budget

The Budget and Planning Section is responsible for financial management of the Hazardous Waste Program (HWP). It is this section’s responsibility to coordinate the program’s budget requests each fiscal year (FY). The state is currently operating in FY 2017, which began on July 1, 2016, and runs through June 30, 2017.

The process to establish the FY 2017 budget began in July 2015 when the state budget director issued budget preparation instructions. The Budget Program, within the Division of Administrative Support, coordinates the department’s overall operating, real estate and capital improvements budgets. The department operating budget, appropriated in House Bill 6 (HB 6), is available online at: oa.mo.gov/sites/default/files/FY_2017_Natural_Resources_Budget_Request_Gov_Rec.pdf.

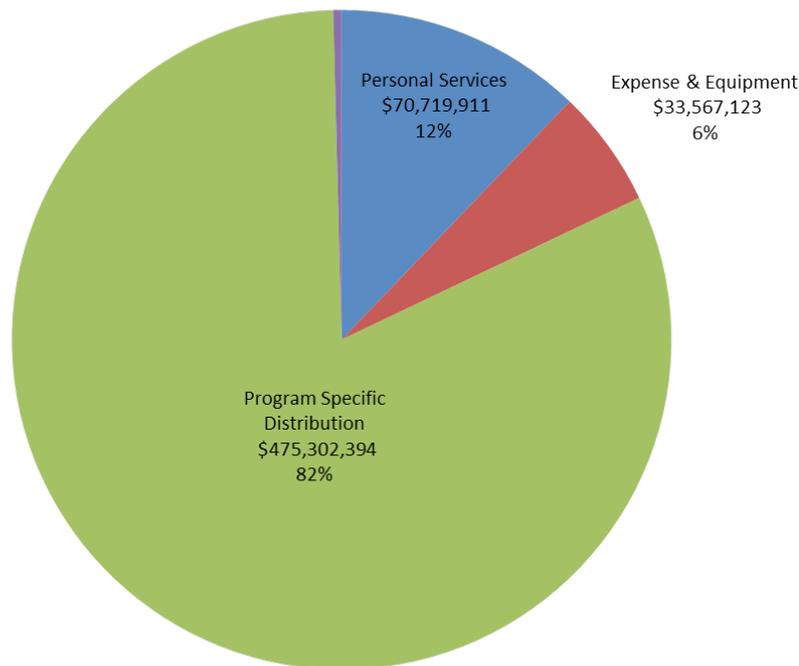
Each state agency is required to submit its completed budget request to the state budget director annually by Oct. 1. The governor may make changes to these requests in his recommended budget released in conjunction with the State of the State address in January.

The department’s FY 2017 operating budget is in HB 6, which was signed by the governor on May 6, 2016. The department’s FY 2018 budget request was submitted Sept. 30, 2016.

FY 2017 Truly Agreed and Finally Passed DNR Operating Budget (HB6)*

\$581,957,702

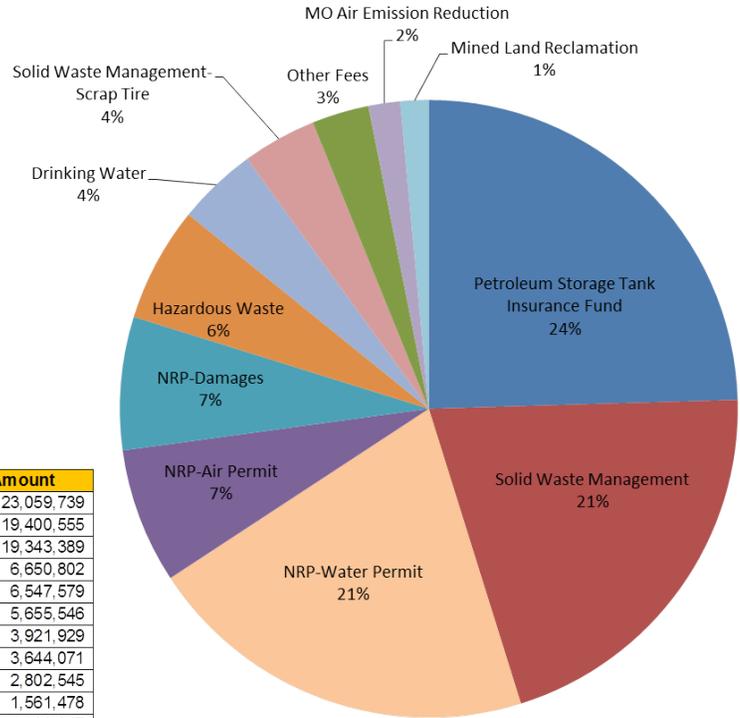
Appropriated GR
Transfers \$2,368,274
<1%



*Includes appropriated General Revenue transfers

Missouri Department of Natural Resources - Hazardous Waste Program

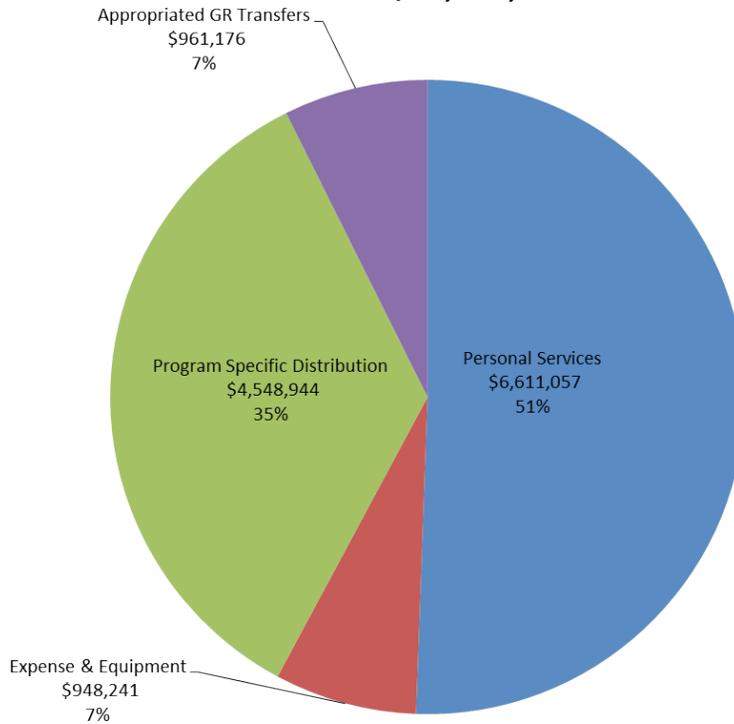
FY 2017 Truly Agreed and Finally Passed DNR Budget - Environmental Fee Fund Appropriations \$93,976,480



Fund	Amount
Petroleum Storage Tank Insurance Fund	\$ 23,059,739
Solid Waste Management	\$ 19,400,555
NRP-Water Permit	\$ 19,343,389
NRP-Air Permit	\$ 6,650,802
NRP-Damages	\$ 6,547,579
Hazardous Waste	\$ 5,655,546
Drinking Water	\$ 3,921,929
Solid Waste Management-Scrap Tire	\$ 3,644,071
Other Fees	\$ 2,802,545
MO Air Emission Reduction	\$ 1,561,478
Mined Land Reclamation	\$ 1,388,847

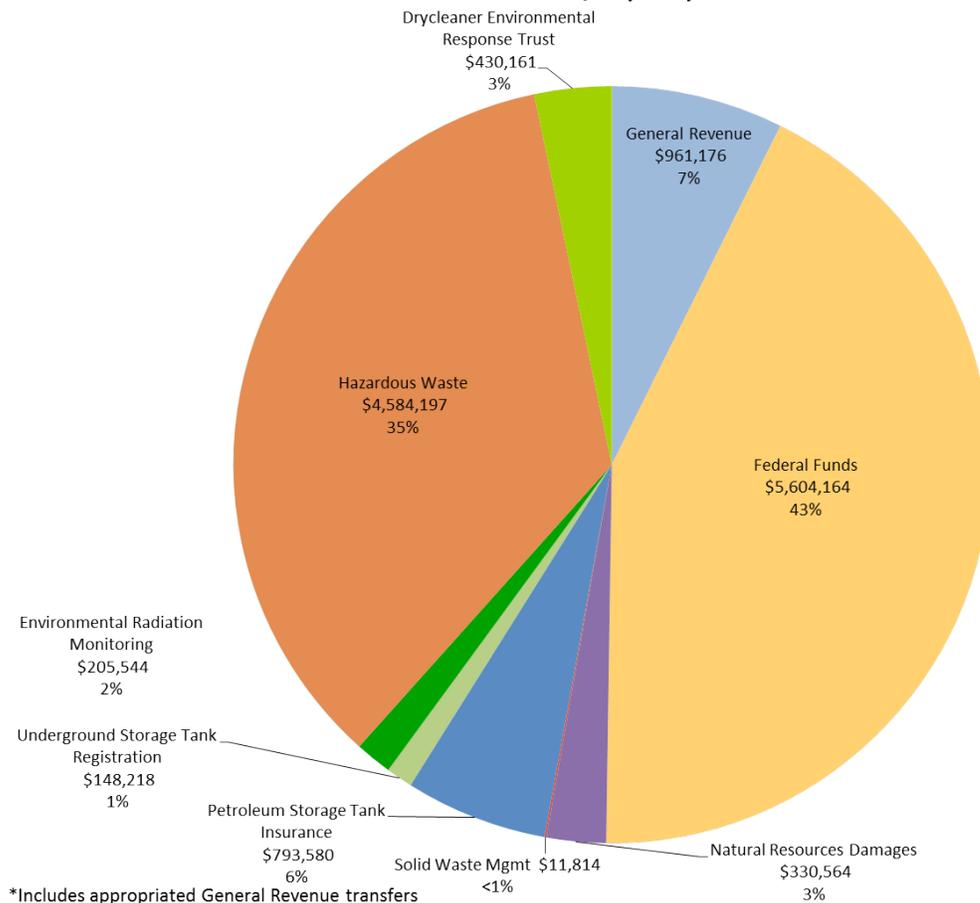
FY 2017 DNR Hazardous Waste Program and Petroleum Related Activities Truly Agreed and Finally Passed Operating Budget (HB6)*

TOTAL: \$13,069,418



*Includes appropriated General Revenue transfers

FY 2017 DNR Hazardous Waste Program and Petroleum Related Activities
 Truly Agreed and Finally Passed Operating Budget (HB6)* by Fund
TOTAL: \$13,069,418



Brownfields/Voluntary Cleanup Program Certificates of Completion

Brownfields are real property where the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight and takes development pressures off greenspaces and working lands. Through this 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.

BVCP issued eight certificates of completion (COCs) for various sites from July through September 2016. This brings the total number of COCs issued to 844.

Shaw Neighborhood Housing Corporation - Auto Repair Shop, St. Louis

The Shaw Neighborhood Housing Corporation - Auto Repair Shop site is located at 4175 Shaw Blvd., in St. Louis. The vacant 1,670 square foot building was built in the 1920s, and was in a state of disrepair when the Shaw Neighborhood Housing Corporation applied for assessment and enrolled the building in the Brownfield Assessment Program. The characterization conducted included the removal of four USTs to determine the extent of releases from the tanks. The results found petroleum constituents were present at levels exceeding residential and non-residential standards. Cleanup through the Voluntary Cleanup Program (VCP) was recommended due to the petroleum constituents and the presence of asbestos in the building.

While enrolled in the VCP, a remedial action plan was approved to excavate and dispose of contaminated soils. During excavation, two additional USTs were discovered, making a total of six removed from the site. The USTs and their contents were disposed of off-site. Following the excavation activities, confirmation samples were taken from the walls and floors of the pits. All excavated soils were disposed of off-site. In addition to the soil removal, an oil/water separator was emptied and cleaned and all waste oil and rinsate was properly disposed. Asbestos-containing materials (ACMs) found in the building and in the roofing materials were abated, and post-abatement air samples were collected and were found to be below the cleanup standard. Following remediation activities, a risk assessment in accordance with the 2006 Missouri Risk-Based Corrective Action (MRBCA) guidance was conducted. The site meets the standards for unrestricted use and the department determined the site is safe for its intended use to be redeveloped as a restaurant.



Rinker Materials (former), Riverside

The Rinker Materials (former) site is located at 4225 Van de Populier Road, in Riverside. The 22.3 acre property is currently vacant with no structures. The property was used exclusively as farmland until the late 1930s and early 1940s when two oil wells and one gas well were drilled on the property and subsequently abandoned. In the 1950s, the property was occupied by Hydro Conduit Corporation/Rinker Materials which produced pre-stressed concrete components for building construction. In 2007, the city of Riverside purchased the property and now intends to sell the property to the Platte Valley Industrial Park for non-residential development.

The historic presence of a 100-gallon aboveground diesel fueling tank is the only known recognized environmental condition identified. In September 2013, five soil borings were advanced across the site to a depth of 20 feet below ground surface. Three of the five soil borings detected total petroleum hydrocarbon-diesel range organics (TPH-DRO), but only one soil boring had levels above MRBCA default target levels (DTLs). The department determined the site is safe for its intended use.

Newton Rail Yard, Newton

The Newtown Rail Yard site is located south of Broadway St. and Maiden Lane, in Newtown. This site is a rail yard developed around 1918. Historically, several USTs and aboveground storage tanks, a treating plant, pump house and water well were reportedly located on site. Phase I and II Environmental Site Assessments were conducted on the property and discovered heavy metals above applicable target levels in both soil and groundwater.



Site investigations conducted in 2011-2012 revealed the presence of lead, cadmium and arsenic in soil above the MRBCA DTLs. Groundwater sampling found mercury and arsenic present in groundwater above MRBCA DTLs.

A 2014 Tier 1 risk assessment was conducted in accordance with MRBCA to determine potential exposure risk. The soil contamination was determined to be within standards for safe nonresidential use. However, soil and groundwater contamination exceeded safe use for consumption and domestic use of groundwater.

The site qualifies for nonresidential use. A restrictive covenant was issued to limit site use to nonresidential and prohibit the use of groundwater. The department determined the site is safe for its intended use.

Troostwood Auto Repair, Kansas City

The Troostwood Auto Repair site is located at 5517 Troost Ave., in Kansas City. The site consists of two adjacent one-story buildings built in 1922 and 1925, with approximately 15,885 square feet of space. Historically, the site was used as a retail gas station and auto repair facility. Based upon information



from the owner, USTs were present on the site from 1920s through the 1960s. The USTs were 200-300 gallons in size and were reportedly removed when the city of Kansas City expanded Troost Ave. in the 1960s. A Phase II Environmental Site Assessment found TPH-gasoline range organics (GRO) in a soil sample above the MRBCA DTLs.

A ground penetrating radar (GPR) survey was performed near the historic USTs. Based on the results of the GPR survey, there is no evidence of USTs at the site. One soil sample collected inside the building near the former dispenser documented a concentration of TPH-GRO above the MRBCA DTLs. Approximately 65 tons of soil were removed and properly transported for off-site disposal. Confirmation soil samples from the walls contained no chemicals of concern above the MRBCA DTLs. No groundwater was encountered during the excavation activities. The department determined the site is safe for its intended use.

Gully Transportation, Hannibal

The Gully Transportation site is located at 2816 Market St., in Hannibal. This site is an operating diesel truck terminal and fueling station. A diesel fuel leak from an underground fuel line was previously addressed by the department's Water Protection Program (WPP), and free product recovery was performed. The site also had a previous release, possibly gasoline, discovered during the investigation of the diesel release. The earlier release was possibly related to the previous use of the site as a trolley car terminal. The WPP requested that Gully Transportation enter the VCP to complete cleanup of the diesel release.



A leaking underground diesel fuel line was discovered at the site in December 2001. The total amount of product released is unknown, but initial response efforts involved the removal of 2,100 gallons of impacted groundwater, in addition to excavation of impacted soils. A retainer basin was also put in place to limit the migration of detected impact to surface waters. Absorbent socks continued to be used on site recovery wells until 2007, when the amount of recovered product was determined to be minimal. Groundwater monitoring for benzene, toluene, ethylbenzene, xylene (BTEX) and TPH-DRO continued until 2015, when stability analysis of the past four years indicated remaining contamination is present below levels of concern for unrestricted use. The department determined the site is safe for its intended use.



Apple Market, Kansas City

The Apple Market (former) site is located at 3719 Independence Ave., in Kansas City. This 2.21-acre site most recently housed a grocery store. Prior to this, the subject property included two gas stations, a dry cleaning plant, a print shop, a boiler repair company, a soda water factory, a coal yard, various retail shops and restaurants, and residential development. A Phase II site investigation revealed the presence of petroleum contamination in the soil and

groundwater in the northwest corner of the property and tetrachloroethylene (PCE) in the groundwater in the southeast portion of the site.

Additional borings placed in the area where the PCE was found during the Phase II revealed no contamination, demonstrating it was just a localized minor exceedance. During November and December 2015, borings were also placed in the northwest area of the site, delineating the petroleum contamination there, with TPH-GRO being the main contaminant. Soil and groundwater contamination, though above residential land use levels, was below non-residential target levels. A covenant, restricting the site's use to non-residential and prohibiting the installation of drinking water wells was placed in the property chain-of-title. The department determined the site is safe for its intended use.

Sun Theater Building, St. Louis

The Sun Theater Building (former) site is located at 3625 Grandel Square, in St. Louis. The 0.37 acre property is paved and contains a 15,442 square foot building with a second-floor mezzanine area and partial basement beneath the stage. The remainder of the building is constructed on a concrete slab. In 1912, the site was developed as the Victoria Theater in a residential neighborhood. The building subsequently operated as a movie theatre, a night club and a church. The property was boarded up in 1972, and officially condemned on March 16, 1988. The property sat vacant until it was purchased for use by the adjacent Grand Center Arts Academy.



In order to redevelop the building for use by the Grand Center Arts Academy, the building was gutted and all ACMs and components with lead-based paint were removed from the building. In total, 61 cubic yards of ACMs; 20 windows with frames; 10 doors with frames; 30,400 square feet of plaster; 2,400 square feet of ceramic tile; 24 linear feet of lead-based paint finish from the spiral staircase on stage; and 15,800 square feet of finish from the brick and plaster walls on the stage, scene room and scene storage were removed from the building and properly disposed. The building now has a refurbished stage and backstage, basement, lobby and auditorium. Additional classrooms were built into the second story. The department determined the site is safe for its intended use.

TEPPCO Cape Girardeau - Gravitometer Release, Scott City

The TEPPCO Cape Girardeau - Gravitometer Release site is located at 10653 State Highway N, in Scott City. The site is a portion of a 215-acre parcel that has operated as a terminal for the storage and transfer of petroleum products. A stainless steel fitting on the pipeline failed, resulting in a release of approximately two barrels of gasoline into an open excavation. The excavation was being performed for an unrelated maintenance task. The release was reported to the department.



A stainless steel fitting on the pipeline failed, resulting in a release of approximately two barrels of gasoline into an open excavation. The excavation was being performed for an unrelated maintenance task. The release was reported to the department.

During site investigation, BTEX, naphthalene and TPH-GRO were found to exceed the MRBCA DTLs for soil. Approximately 9.5 tons of contaminated soil were removed and disposed offsite. Remaining concentrations of gasoline constituents in the excavation exceeded the MRBCA risk-based target levels for unrestricted use. An environmental

covenant was placed in the property's chain of title with the Scott County Recorder of Deeds. The department determined the site is safe for its intended use and is still an active pipeline terminal.

Sites in Brownfields/Voluntary Cleanup Program

Month	Active	Completed	Total
July 2016	219	823	1042
August 2016	218	826	1044
September 2016	221	829	1050

New Sites Received: 16

July

- Solar Transport Tanker Release - Brookline
Brookline
- Raben Tire - Kennett, Kennett
- Raben Tire - Poplar Bluff, Poplar Bluff
- Pride Cleaners - Westport Road, Kansas City
- Trojan Heat Treat, Joplin

August

- Arnold Professional Cleaners, Arnold
- Rogers Foundry/Joplin Steel, Joplin
- Northern Missionary Baptist Church, St. Louis
- Union Trust Redevelopment (former), St. Louis

September

- RNC Enterprises Inc., St. Louis
- Walgreens, St. Louis
- Crossroads Apartments, Kansas City
- Jones Storage Building, St. Louis
- Green Street Armory, St. Louis
- Green Street 2900, St. Louis
- Green Street Investors, St. Louis

Sites Closed: 8

July

- Shaw Neighborhood Housing Corporation - Auto
Repair Shop, St. Louis
- Rinker Materials (former), Riverside

August

- Gully Transportation, Hannibal
- Sun Theater Building (former), St. Louis
- Apple Market (former), Kansas City

September

- TEPPCO Cape Girardeau - Gravitometer Release,
Scott City
- Newtown Rail Yard, Newtown
- Troostwood Auto Repair, Kansas City

Drycleaning Environmental Response Trust Fund

HWP’s Drycleaning Environmental Response Trust (DERT) Fund provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from drycleaning facilities. The two main sources of revenue for the fund are the drycleaning 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.

Calendar Year 2015	Active Drycleaning Facilities	Facilities Paid	Facilities in Compliance
January - March 2016	119	59	49.58%
April - June 2016	119	102	85.71%
July - September 2016	119	106	89.08%

Calendar Year 2016	Active Solvent Suppliers	Suppliers Paid	Suppliers in Compliance
January - March 2016	12	11	91.67%
April - June 2016	12	11	91.67%
July - September 2016	12	9	75.00%

Cleanup Oversight

Calendar Year 2016	Active Sites	Completed Sites	Total
January - March 2016	19	16	35
April - June 2016	19	16	35
July - September 2016	19	16	35

New Sites Received: 0

Sites Closed: 0

Reimbursement Claims

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

Month	Received	Under Review	Processed
July	0	0	0
August	6	2	1
September	1	2	1

Month	Received	Under Review	Processed
July	\$0.00	\$0.00	\$0.00
August	\$80,827.56	\$29,235.29	\$15,798.50
September	\$46,809.92	\$24,129.59	\$22,378.50

Two reimbursement claims were processed during this period:

American Cleaners (Ballwin)	Ballwin	\$22,378.50
U.S. Cleaners (Lindbergh Blvd.)	St. Louis	\$15,798.50

Total reimbursements as of Sept. 30, 2016: \$2,941,490.27

DERT Fund Balance as of Sept. 30, 2016: \$221,510.75

Munitions Contamination, Explosives Disposal and the Military Munitions Rule

Background

Historically, military preparedness and environmental protection have been at odds. More often than not, environmental protection issues have taken a back seat to national defense issues. During much of the Cold War era, not only did the U.S. government prioritize military operations, but society, as a whole, did not fully understand the consequences of their actions on the environment. Once the U.S. Environmental Protection Agency (EPA) was created, it found itself unable to enforce Resource Conservation and Recovery Act (RCRA) requirements on military and federal facilities.

Recognizing the shortcomings of the system regarding environmental protection, Congress passed the Federal Facilities Compliance Act (FFCA) of 1992. FFCA put federal facilities, including military facilities, in the same position as private industry in regards to complying with RCRA regulations. FFCA explicitly gave EPA enforcement authority for RCRA violations at federal facilities. After five years of consulting with the Secretary of Defense and state officials, EPA promulgated the Military Munitions Rule to further address the mandates of FFCA.

Military Munitions Rule

The main purpose of the Military Munitions Rule is to address specific issues concerning the handling of munitions in regards to RCRA. One of the most important aspects of the rule is identifying when munitions are or are not considered a waste for regulatory purposes. In 40 CFR 260.10, military munitions are defined as all ammunition products and components used by the U.S. Armed Services, which include confined gaseous, liquid and solid propellants; explosives; pyrotechnics; chemical and riot control agents; smokes; and incendiaries used by Department of Defense (DoD) agencies. These types of munitions can include any of the following:

- Bulk explosives
- Chemical warfare agents and chemical munitions
- Rockets and guided ballistic missiles
- Bombs
- Warheads
- Mortar rounds and artillery ammunition
- Small arms ammunition
- Grenades and mines
- Torpedoes and depth charges
- Cluster munitions and dispensers
- Demolition charges and devices, and parts of them, including non-nuclear components of nuclear devices after required sanitization (decontamination)

This military munitions definition excludes inert (non-explosive or reactive) items; makeshift explosives; nuclear weapons and devices; and any nuclear parts of these devices. Under the Military Munitions Rule, any munitions used for their intended purpose are not considered a solid waste, and therefore are not considered a hazardous waste, even when their use results in waste or contamination being left on the ground.

Today, millions of acres of former munitions ranges have been transferred from the military to be used for other purposes. However, many of these former ranges are contaminated with unexploded ordnances and other hazardous materials left behind from military live-fire training, open burn/open detonation (OB/OD) of munitions and the destruction or burial of munitions-related materials at these sites. The DoD is currently working to define the extent of contamination from military munition activities at these formerly used defense sites. Past reports indicate DoD suspect an estimated 15 million acres of land are contaminated



due to military munitions operations. This issue is made worse when combining the legacy of the Cold War with a growing stockpile of munitions managed by the Army for the DoD. According to the Government Accountability Office, in 2015, the stockpile of military munitions waste to be destroyed was approximately 530,000 tons, and expected to grow to over 1.1 million tons by 2020.

Some facilities in Missouri are working to reduce munition waste, like the Lake City Army Ammunition Plant (LCAAP) that produces small arms. Other facilities, like EBV Explosives Environmental Co. (EBV), are actively working to reduce the stockpile of military munition waste.

Lake City Army Ammunition Plant

LCAAP is a U.S. government-owned, contractor-operated facility in Independence. The plant began operating in 1941, under the jurisdiction of the U.S. Army Armament, Munitions and Chemical Command, to manufacture and test small caliber ammunition for the U.S. Army. The plant is currently operated by Alliant and produces a variety of small-arms ammunition including .30 caliber, .50 caliber, 5.56 mm, 7.62 mm, 20 mm and 30 mm ammunition. The plant is the largest small arms plant in the world and, as of 2007, produced 1.4 billion small arms rounds per year. Naturally, not all rounds of ammunition produced meet DoD specifications. With so many rounds being produced yearly, the pile of munitions not meeting the quality standards (off-specification) can grow rapidly. To address this, LCAAP is permitted to store and incinerate hazardous wastes, which include obsolete and off-specification ammunition, scrap propellant powders and explosive wastes produced both on- and off-site by Alliant, DoD and DoD contractors. LCAAP's permitted incinerator consists of a rotary kiln with an air pollution control system designed to control hazardous gas emissions.

EBV Explosives Environmental Co.

EBV, doing business as General Dynamics Ordnance and Tactical Systems Munition Services, operates two incinerators and 10 thermal treatment units for the sole purpose of treating explosive waste. The facility is the largest commercial disposer of explosive materials and devices in the U.S. The company is a Prime Program Management Contractor in the U.S. Army Joint Munitions Command's program to reduce and recycle stockpiled munitions. EBV currently holds the largest demilitarization contract for munitions waste awarded in the U.S. Part of the storage and demilitarization operations at EBV are subject to the Military Munitions Rule, which allows the facility to work within DoD guidelines as opposed to RCRA requirements.

In addition to dismantling and thermally treating (incinerating) munitions, EBV also specializes in metals and plastics recovery, recycling explosive materials for commercial reuse and incineration of explosive hazardous wastes. These non-military explosive hazardous wastes are from a number of industries including the following:

- Aircraft safety systems
- Automotive occupant restraint industry
- Commercial explosives industry
- Fireworks and pyrotechnics industries
- Fire suppression systems
- Law enforcement agencies
- Marine signal and flare users
- Oil well servicing industry
- Riot control equipment
- Smoke, signal and flare industry



Current Demilitarization Practices

For years, the military's preferred method of disposal for explosives has been OB/OD. There are many environmental concerns regarding open burning of explosives and munitions, such as potential soil and groundwater contamination, hazardous gas emissions and the large safe space distances required for doing this type of activity. Hazardous waste open burning has been banned in the U.S. since the 1970s; however, the military had exemptions for propellants that could not be safely disposed through other means. Public pressure has recently been pushing this method of disposal to be increasingly restricted and forcing the Army to consider alternatives to OB/OD treatment. For example, in 2012, a storage bunker exploded at Camp Minden, La. where M-6 propellant was improperly stored. EPA initially planned to handle the approximately 16 million pounds of munitions and igniters remaining at Camp Minden by open burning the material. After push back from the community on the proposed plan, the Army agreed to have an incinerator shipped to the site to begin burning the material. Incineration of this material is generally preferred to OB/OD because incinerators are able to safely dispose of the material and have air pollution controls in place.

With the increasing pressure and changing requirements for the DoD to dispose of its obsolete and off-specification ammunition and explosive wastes in more environmentally conscious ways, installations, such as the incinerator at the Lake City Army Ammunition Plant and the numerous thermal treatment units at EBV, will become more common modes of disposal and destruction of munition wastes.

Potential Early Transfer of the Bannister Federal Complex

The current Kansas City Bannister Federal Complex (BFC) is the location of a former missile facility, and contains a significant amount of legacy contamination. The 300-acre BFC property may soon be transferred to



Photograph courtesy of U.S. Department of Energy

a private entity as a means of fostering redevelopment and to avoid allowing it to sit idle. The property, which is currently owned by The U.S Department of Energy/National Nuclear Security Administration (DOE/NNSA) and General Services Administration (GSA), was built in 1942 to manufacture naval aircraft engines and later jet engines. In 1949, the predecessor of the DOE began producing non-nuclear parts for nuclear weapons in part of the facility. Past manufacturing operations and related waste management practices and spills at BFC led to soil and groundwater contamination, mainly with volatile organic compounds and polychlorinated biphenyls (PCBs). DOE began remediation in the mid-1980s and hazardous waste cleanup ultimately fell under the authority of the state and federal RCRA program. DOE has spent approximately \$70 million on cleanup so far, but parts of the site remain contaminated.



Photograph courtesy of Missouri Valley Special Collections, Kansas City Public Library, Kansas City, Missouri

DOE/NNSA and GSA are currently conducting post-closure care for three former hazardous waste management units and facility-wide corrective action activities under two hazardous waste permits. BFC also has a Missouri State Operating Permit, which regulates stormwater discharges from the facility to nearby streams. These permits stay with the property should a change of owner/operator take place.

DOE/NNSA and GSA have been working with CenterPoint Properties (CenterPoint) as a preferred partner to redevelop the portion of BFC west of the railroad tracks. CenterPoint has been performing due diligence investigations at BFC, evaluating whether an early transfer of the property from the federal government to them (a private entity) can occur before all corrective action is complete. CenterPoint has been submitting their due diligence investigation work plans and reports to NNSA, GSA, EPA and the department. This early transfer process allows the federal government to transfer property prior to completion of cleanup at the site and requires the governor's agreement on a covenant deferral.

Should the early transfer occur, it will speed remedial work and the redevelopment of the property. CenterPoint plans to demolish most of the existing buildings, remove substantial amounts of contaminated soil and replace that material with department-approved fill material; regrade the surface topography; reconfigure and redirect the stormwater outfalls; continue pumping, treating and containing contaminated groundwater; and redevelop the property for non-residential use. The private developer is working with the community, the city, legislators and corporate entities to design redevelopment opportunities that will provide reuse, economic benefit and jobs to south Kansas City. DOE plans to request the governor's approval of the covenant deferral in mid to late 2017.

Regional Office Hazardous Waste Compliance Efforts

- Conducted 151 hazardous waste generator compliance inspections:
 - 28 large quantity generators
 - 68 small quantity generators
 - 36 conditionally exempt small quantity generators
 - Six focused compliance inspections
 - Seven E-waste facilities
 - Six resource recovery facilities
- Issued 37 letters of warning and four notices of violation (NOVs) requiring actions to correct violations cited during the 151 inspections conducted
- Conducted 11 compliance assistance visits at hazardous waste generators
- Received 47 citizen concerns regarding hazardous waste issues and conducted field investigations on 43 citizen concerns

Special Facilities Unit

Commercial Facility Inspectors

Special facilities inspectors conducted 13 inspections of commercial hazardous waste treatment, storage and disposal facilities.

Polychlorinated Biphenyl (PCB) Inspector

The inspector conducted 19 compliance inspections at various types of facilities throughout the state. The inspector's reports are forwarded to EPA Region 7, which has authority for taking any necessary enforcement action regarding PCBs according to the Toxic Substances Control Act.

Hazardous Waste Transporters

More than 90 Hazardous Waste Transporter License compliance background checks were completed. Staff also updated the Missouri's List of Licensed Hazardous Waste Transporters. The list includes transporters licensed to haul hazardous waste, infectious waste and used oil in Missouri and it can be accessed on our webpage: dnr.mo.gov/env/hwp/transporters.php.

Hazardous Waste Enforcement Unit

Enforcement Efforts

- Resolved six hazardous waste enforcement cases
- Received six new enforcement cases

MFA Inc., Odessa

On Sept. 25, 2015, MFA Inc., located in Odessa, had a hazardous waste compliance evaluation inspection conducted by department staff. The inspection was initiated by an environmental concern reporting abandoned drums on the site and it focused on the abandoned waste. Several containers of waste were observed in a shed to the south of the west-most building. It was determined the material had been abandoned by AP Production LLC, the previous company operating at the site. AP Production LLC manufactured plastic injection molding parts for various businesses and manufacturers. MFA

Inc. purchased this 21-acre site in 2014. As a result of the inspection, a NOV was issued for failure to determine if a waste was hazardous.

In response, MFA Inc. quickly engaged an environmental contractor to begin the process of making determinations and properly disposing of the abandoned waste. On Dec. 16, 2015, department staff met with MFA Inc. representatives and contractors on site to start the evaluation process. Staff received the analytical report on Feb. 23, 2016, confirming that the waste was removed.

Because the waste material was left on site by the previous owner and MFA Inc. paid to dispose of it, MFA Inc. did not achieve any economic benefit from this non-compliance, but incurred significant cost for the cleanup. MFA Inc. was also fully cooperative with the department in removing the waste. In addition, there was no apparent release into the environment. Based on these circumstances, the department chose not to seek a penalty.

Pesticide Collection Program Activities

Pesticide Collection Events

Pesticide collection events have been scheduled for 2017.

1. Portageville, March 11, 2017, 8 a.m.-12 p.m., University of Missouri – Fisher Delta Research Center, 147 W. State Highway T, Portageville, Mo 63873
2. Fairfax, March 25, 2017, 8 a.m.-12 p.m., University of Missouri – Graves-Chapple Research Center, 29955 Outer Road, Fairfax, Mo 64446
3. St. Peters, June 3, 2017, 8 a.m.-12 p.m., University of Missouri Extension Center – St. Charles County, 260 Brown Road, St. Peters, Mo 63376
4. Sikeston, June 24, 2017, 8 a.m.-12 p.m., DeWitt Auction Company, 220 DeWitt Drive, Sikeston, Mo 63801
5. Chillicothe, July 15, 2017, 8 a.m.-12 p.m., Litton Ag Center, 10780 Liv 235, Chillicothe, Mo 64601
6. Lockwood, Oct. 14, 2017, 8 a.m.-12 p.m., S & H Farm Supply, 7 State Road A, Lockwood, Mo 65682

Check out the Pesticide Collection Program webpage at: dnr.mo.gov/env/hwp/pesticide for fliers.

Underground Storage Tank Compliance and Technology Unit

Federal rule changes

In 2011, U.S. EPA proposed significant changes to the UST regulations. The final version of those federal rules was published in July and became effective Oct. 13, 2015. Please note, these rules are not yet effective in Missouri; they will not be effective in Missouri until the department promulgates Missouri's regulations or until EPA follows its procedures for withdrawal of our state program approval. The rules include new testing requirements for release detection equipment; overfill prevention equipment (e.g., flapper valves, ball float valves and alarms), spill buckets and containment sumps. Previously deferred airport fuel hydrant systems and field constructed tanks will now be regulated. Missouri must also include a new requirement for all new systems installed after July 1, 2017, to be double walled with enhanced leak monitoring.

The UST Compliance and Technology Unit (CTU) hosted a public outreach meeting on July 21, 2016, about the rule changes. In addition, information was presented about these rules at MWCC Conference at Tan-Tar-A on July 12, 2016. The UST/CTU staff met with the regulated community to discuss these

upcoming rule changes at the Missouri Petroleum Marketers and Convenience Store Association Board meeting on June 13, 2016, and the Petroleum Storage Tank Insurance Fund’s (Fund) Advisory Committee meeting on June 14, 2016.

The draft rules were published on Sept. 15, 2016, in the *Missouri Register*, with two rules reprinted in the Oct. 3, 2016, *Missouri Register* to correct a typo. Public hearings were held on Oct. 20, 2016, and Nov. 3, 2016. The formal comment period for all of the rules is now closed. The department will present the final proposed rules at the Dec. 15, 2016, Hazardous Waste Commission meeting.

For updates and information on these upcoming rule changes, please visit our webpage: dnr.mo.gov/env/hwp/ustchanges.htm.

Operator Training

Operator training is available online. Class A/B operator training and Class C operator training are both available, as well as a “test only” option. The rule is also available online, which includes a compliance deadline of July 1, 2016. The department and the Fund will also be accepting reciprocity from some of our neighboring states. The training program may be found on the Fund’s webpage: optraining.pstif.org/intro/.

Tank inspections

State FY 2016 contract inspections are complete. The department inspections continue, especially the new installation inspections during this busy construction time of year. As seen in previous years, Missouri owners, operators and contractors continue to demonstrate their proactive compliance by being responsive to issues when found, demonstrating a willingness to be a partner in ensuring all Missouri USTs are in compliance. The department is maintaining compliance with the EPA requirement of inspecting all regulated facilities at least every three years. The department must also demonstrate all facilities are either in compliance or are moving to gain compliance. This goal is much easier to accomplish when owners, operators, contractors and regulators are all working together.

Financial Responsibility

Efforts continue to resolve violations with facilities not maintaining a financial responsibility mechanism to address releases and to protect third parties. Because of these efforts by the UST/CTU staff and the Attorney General’s Office (AGO), the number of facilities without a verified financial responsibility mechanism is less than 2.0 percent.

Enforcement Efforts

In this time period, 10 cases were referred to the AGO for enforcement action.

The following enforcement actions were taken in this quarter:

Facility/Responsible Party	Summary of Violation	Resolution Summary and Compliance Status
Amoco St Clair 1125 Sycamore St. Clair, Mo	Financial responsibility, release detection for tanks and piping, and tank upgrade compliance.	Site established financial responsibility, violations still pending on tank upgrade compliance.
Golden Bear Fireworks of Mo 2606 S. Service Road E Stanton, Mo	Failure to have financial responsibility.	Preliminary injunction approved and three USTs locked out under the order. Site remains out of compliance with financial responsibility at this time.
KC Shell - SE 519 3900 Noland Road Independence, Mo	Failure to have financial responsibility.	Petition filed. Site returned to compliance. Court hearing pending to resolve civil penalty.

Missouri Department of Natural Resources - Hazardous Waste Program

ENFORCEMENT

Snyder's MFA (aka Johnson's Service) JCT HWY S. 65 & 136 Princeton, Mo	Failure to have financial responsibility.	Settlement agreement finalized. Site is to remove USTs and address contamination.
Tobacco Discounts, LLC 1116 S. Crysler Independence, Mo	Failure to have financial responsibility.	Site returned to compliance. Consent judgement is being negotiated for civil penalty.
Country Shop 11901 W. HWY 32 Lebanon, Mo	Failure to have financial responsibility.	Site returned to compliance. Consent judgement is being negotiated for civil penalty.
Sam's Food Mart, LLC 6408 E. 87th Kansas City, Mo	Failure to have financial responsibility.	Site returned to compliance. Consent judgement entered.
Tamara Phillips 7000 Manchester Ave. St. Louis, Mo	Failure to have financial responsibility.	Site returned to compliance. Settlement agreement entered.
EZ Mart LLP 1334 Frederick Ave. St. Joseph, Mo	Failure to have financial responsibility.	Site returned to compliance. Default judgement entered. Penalty of \$50 per day from Sept. 18, 2015, through and including Aug. 16, 2016, imposed in addition to the calculated penalty by the court.
Howe Oil 100 E. Orleans St. Pacific, Mo	Failure to conduct corrective action for aboveground storage tank.	Abatement order issued without a response. Referred to AGO.
Midway Truck Stop 14841 St., HWY 177 Jackson, Mo	Failure to permanently close an out-of-use UST.	Abatement order issued. Site removed USTs and a No Further Action letter was issued. No civil penalty was sought.
Phillips 66 (formerly Petro Mart) 3307 Lemay Ferry Road St. Louis, Mo	Failure to have financial responsibility and conduct permanent closure.	Site remains out of compliance. Referred to AGO.
Short Stop 9013 E. 40 HWY Independence, Mo	Failure to have financial responsibility.	Site returned to compliance. Compliance judgement entered.
The Store 1702 First St. Kennett, Mo	Failure to have financial responsibility.	Site referred to AGO.
The Store II 911 Independence Ave. Kennett, Mo	Failure to have financial responsibility.	Site referred to AGO.
Lil Country Store 15970 HWY 64 Lebanon, Mo	Failure to have financial responsibility.	Site referred to AGO.
M&R Oil, Inc. 4207 Jennings Station Road St. Louis, Mo	Failure to have financial responsibility. Failure to conduct release detection on tanks and piping. Failure to operate corrosion protection.	Site referred to AGO.
KS Kwik Korner 1213 Gravois St. Clair, Mo	Failure to have financial responsibility.	Site referred to AGO.

Underground Storage Tank Facilities with Unknown Financial Responsibility Status Report

Financial Responsibility Status	Number of Facilities
Initial Request Letter Sent	12
Notice of Violation Sent	9
Currently in Enforcement	21
Referred to Attorney General's Office	14
Total Number of Facilities with Unknown Financial Responsibility	56

Number of Facilities in Each Financial Responsibility Step



Tanks Section Holds Workshop at MWCC

The HWP's Tanks Section held a Tanks Workshop on July 12, 2016, as part of the MWCC Conference, at the Tan-Tar-A resort, at Lake of the Ozarks. This was the eighth annual workshop in conjunction with MWCC events. This workshop was targeted toward environmental consultants who provide services to tank owners and operators. The conference provided consultants with information and training regarding imperfect data sets and plume stability analysis; the transport of methyl-tertiary-butyl-ether through groundwater in the Missouri bootheel; free product recovery; and LNAPL conceptual site models. It also provided consultants a forum to engage the Tanks Sections on a question and answer session regarding these topics.

The workshop included departmental staff, along with private consultants, private laboratories and others.

Tank Section Staff Participate on National Workgroups

The Tanks Section has one staff member, Valerie Garrett, who has been participating on the International Technology and Regulatory Council's (ITRC) Work Group on Petroleum Vapor Intrusion. This work group has completed its work on the development of a web-based guidance document and training on petroleum vapor intrusion.

The section also has Laura Luther, RBCA Unit Chief, participating on the LNAPL Update Team. The ITRC developed a guidance document on "Evaluating LNAPL Remedial Technologies of Achieving Project Goals," in 2009. The Update Team is working to develop a comprehensive up-to-date web-based guidance document that will incorporate from recent years newly developed, cutting edge science, with the historical information and lessons learned, for the assessment and management of LNAPL contaminated sites.

In addition to the update team, Laura Luther is also participating on the Association of State and Territorial Solid Waste Management Officials Emerging Fuels Task Force. The mission of the Emerging Fuels Task Force is to assist the states' and territories' UST programs by providing resources and information related to managing the storage and releases of new fuels that are in use or in development.

Missouri Department of Natural Resources - Hazardous Waste Program

TANKS

Petroleum Storage Tanks Regulation September 2016

Staff Productivity	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	TOTAL
Documents received for review	185	223	215	0	0	0	0	0	0	0	0	0	623
Remediation documents processed	146	213	211	0	0	0	0	0	0	0	0	0	570
Closure reports processed	3	18	14	0	0	0	0	0	0	0	0	0	35
Closure notices approved	12	11	11	0	0	0	0	0	0	0	0	0	34
Tank installation notices received	7	7	5	0	0	0	0	0	0	0	0	0	19
New site registrations	2	4	3	0	0	0	0	0	0	0	0	0	9
Facility Data	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	TOTAL
Total in use, out of use and closed USTs	41,146	41,170	41,191	0	0	0	0	0	0	0	0	0	
Total permanently closed USTs	32,217	32,253	32,287	0	0	0	0	0	0	0	0	0	
In use and out of use USTs	8,929	8,917	8,904	0	0	0	0	0	0	0	0	0	
Out of use USTs	721	702	693	0	0	0	0	0	0	0	0	0	
Total hazardous substance USTs	405	405	404	0	0	0	0	0	0	0	0	0	
Facilities with in use and out of use USTs	3,430	3,425	3,421	0	0	0	0	0	0	0	0	0	
Facilities with one or more tank in use	3,176	3,177	3,173	0	0	0	0	0	0	0	0	0	

Closures

Underground Storage Tanks	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	TOTAL	All Yrs
Closure Reports Reviewed	3	18	14	0	0	0	0	0	0	0	0	0	35	
Closure Notices Approved	12	11	11	0	0	0	0	0	0	0	0	0	34	
Number of Tanks Closed (Closure NFA)	6	35	34	0	0	0	0	0	0	0	0	0	75	

Cleanup

Underground Storage Tanks													TOTAL	All Yrs
UST release files opened this month	5	9	12	0	0	0	0	0	0	0	0	0	26	6,798
UST cleanups completed this month	4	19	15	0	0	0	0	0	0	0	0	0	38	6,016
Ongoing UST cleanups	797	787	782	0	0	0	0	0	0	0	0	0		
Aboveground Storage Tanks														
AST release files opened this month	0	1	2	0	0	0	0	0	0	0	0	0	3	490
AST cleanups completed this month	0	3	4	0	0	0	0	0	0	0	0	0	7	316
Ongoing AST cleanups	178	176	174	0	0	0	0	0	0	0	0	0		
Both UST and AST														
Total release files-both UST & AST	0	1	0	0	0	0	0	0	0	0	0	0	1	83
Cleanups completed-both UST & AST	0	0	0	0	0	0	0	0	0	0	0	0	0	54
Ongoing cleanups-both UST & AST	28	29	29	0	0	0	0	0	0	0	0	0		
Unknown Source														
Total release files-unknown source	0	2	1	0	0	0	0	0	0	0	0	0	3	231
Cleanups completed-unknown source	0	0	0	0	0	0	0	0	0	0	0	0	0	214
Ongoing cleanups-unknown source	14	16	17	0	0	0	0	0	0	0	0	0		
Documents Processed	146	213	211	0	0	0	0	0	0	0	0	0	570	
*Reopened Remediation Cases	0	0	0	0	0	0	0	0	0	0	0	0	0	84

* Reopened Remediation Cases was added Nov. 18, 2009 - the cumulative total has been queried and a running total will be tracked/reported with the FY 2010 Tanks Section Monthly Reports.

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.