



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

*DRAFT*

**NOTICE OF OPEN MEETING**

The meeting will also be streamed live from the Department's website at:

*[dnr.mo.gov/videos/live.htm](http://dnr.mo.gov/videos/live.htm)*

**DEPARTMENT OF NATURAL RESOURCES  
HAZARDOUS WASTE PROGRAM  
HAZARDOUS WASTE MANAGEMENT COMMISSION  
AGENDA**

**April 20, 2017**

**Department of Natural Resources, Hazardous Waste Program  
Nightingale Creek Conference Room  
L&CSOB - 1101 Riverside Drive  
Jefferson City, MO 65102**

**Note: Persons with disabilities requiring special services or accommodations to attend the meeting can make arrangements by calling the commission assistant at (573) 751-2747 or writing to the Hazardous Waste Program, P.O. Box 176, Jefferson City, MO 65102. Hearing impaired persons may contact the Hazardous Waste Program through Relay Missouri at 1-800-735-2966. Persons requesting to speak before the Commission will be limited to 5 minutes unless directed otherwise by the Chair.**

**9:45 A.M. EXECUTIVE (CLOSED) SESSION**

In accordance with Section 610.022 RSMo, this portion of the meeting may be closed by an affirmative vote of the Commission to discuss legal matters, causes of action or litigation as provided by Subsection 610.021(1). RSMo.

**10:00 A.M. GENERAL (OPEN) SESSION**

The General (Open) Session will begin promptly at 10:00 a.m., unless an Executive (Closed) Session has been requested; after which, the General Session will start as specified by the Commission's chairman.

**Commissioner Roll Call**

1. Pledge of Allegiance – Commissioners
2. Approval of Minutes – General (Open) Session, Dec. 15, 2016 – Commissioners

**Action Item**

3. Certification of Decision – Election of Officers - Commissioners

**Information Only**

4. Rulemaking Update – Tim Eiken, Director’s Office, HWP
5. Legislative Update – Tim Eiken, Director’s Office, HWP
6. Financial Responsibility – Mike Martin, Compliance and Enforcement Section, HWP
7. Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri (Registry) Annual Report – Valerie Wilder, Superfund Section, HWP
8. E-Start Mapper Update – Don Cripe, Brownfield Voluntary Cleanup Section, HWP
9. Pesticide Collection/Applicator Training Update – C.J. Plassmeyer, Compliance & Enforcement Section, HWP
10. E-Scrap Annual Report – Tony Pierce, Compliance & Enforcement Section, HWP
11. Quarterly Reports (2) – Amy Poos, Public Information, HWP
12. Legal Update – Brook McCarrick, Office of the Attorney General
13. Public Inquiries or Issues – Angie McMichael, Acting Director, HWP
14. Other Business – Angie McMichael, Acting Director, HWP
15. Future Meetings  
Thursday, June 15, 2017 – to be held in the Roaring River/Bennett Springs  
Conference Rooms, 1730 E. Elm Street Conference Center, Jefferson City, MO

Adjournment

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
HAZARDOUS WASTE MANAGEMENT COMMISSION**

**Meeting Date: April 20, 2017**

**ROLL CALL ROSTER**

	<b>In Person:</b>	<b>By Phone:</b>	<b>Absent</b>
<b>Chairman Elizabeth Aull</b>	_____	_____	_____
<b>Vice-Chairman Jamie Frakes</b>	_____	_____	_____
<b>Commissioner Charles Adams</b>	_____	_____	_____
<b>Commissioner Michael Foresman</b>	_____	_____	_____
<b>Commissioner Mark Jordan</b>	_____	_____	_____

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 1**

**Pledge of Allegiance**

## **Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 2**

### **Approval of Minutes**

#### **Issue:**

- Commission to review the General Session minutes from the Dec 15, 20, 2016, Hazardous Waste Management Commission meeting.

#### **Recommended Action:**

- Commission to approve the General Session minutes from the Dec 15, 2016, Hazardous Waste Management Commission meeting.

**GENERAL**

**SESSION**

**MEETING**

**MINUTES**

GENERAL SESSION  
HAZARDOUS WASTE MANAGEMENT COMMISSION  
December 15, 2016; 10:00 A.M.  
1730 E. Elm Street  
Bennett Springs/Roaring River Conference Rooms  
Jefferson City, MO 65102

*(Note: The minutes taken at Hazardous Waste Management Commission proceedings are just that, minutes, and are not verbatim records of the meeting. Consequently, the minutes are not intended to be and are not a word-for-word transcription.)*

The meeting was streamed live from the Department's website at: [dnr.mo.gov/videos/live.htm](http://dnr.mo.gov/videos/live.htm).

The phone line, for those Commissioners calling in to today's meeting, was opened at 9:30 a.m.

COMMISSIONERS PRESENT IN PERSON

Chairman Elizabeth Aull  
Commissioner Mark Jordan  
Commissioner Michael Foresman  
Commissioner Charles Adams

COMMISSIONERS PRESENT BY PHONE

Vice-Chairman Jamie Frakes

Chairman Aull called the General Session to order at approximately 10:00 a.m.

A roll call was taken of the Commissioners. Chairman Elizabeth Aull, Commissioner Michael Foresman, Commissioner Charles Adams and Commissioner Mark Jordan were present in person. Vice-Chairman Jamie Frakes was present by phone. A quorum was established.

1. PLEDGE OF ALLEGIANCE

Chairman Aull led the recitation of the Pledge of Allegiance by the Hazardous Waste Management Commission (Commission) and guests.

2. APPROVAL OF MINUTES

- General Session minutes from the Oct. 20, 2016, meeting:

Commissioner Foresman made a motion to approve the Oct. 20, 2016, General Session minutes. Commissioner Adams seconded the motion.

*A vote was taken; all were in favor, none opposed. Motion carried. Minutes were approved.*

- General Session minutes from the Nov. 3, 2016, meeting:

Commissioner Foresman made a motion to approve the Nov. 3, 2016, General Session minutes. Commissioner Jordan seconded the motion.

*A vote was taken; all were in favor, none opposed. Motion carried. Minutes were approved.*

3. CERTIFICATION OF DECISION – PROPOSED AMENDMENTS TO 10CSR26 – UNDERGROUND STORAGE TANK RULES

Ms. Heather Peters, Compliance and Enforcement Section, HWP, addressed the Commission and provided a PowerPoint presentation outlining the basis for the proposed amendments to the Underground Storage Tank rules. She began by noting that the changes to the rules were necessitated under the State Program Approval (SPA) from the Environmental Protection Agency and advised that they were needed for Missouri to run Missouri's program, were needed to keep any state-specific rules or determinations; and, if new rules are not promulgated, the SPA could very likely be in jeopardy. Ms. Peters went on to describe who had provided comments on the rule package and provided a timeline for filing the rule package.

Ms. Peters provided the Commission with an overview of the response to comments document, noting that 106 individual comments (plus MPCA's support of the 87 submitted by PSTIF and four submitted by a large oil company) were received. She went on to state that the Department had provided 148 response to comments (some comments applied to multiple rules) and that six "significant" comments from PSTIF and one significant topic from Lambert-St. Louis International Airport were addressed in the responses. She stated that most other comments were regarding wording, phrasing, semantics and implementation of rules or were outside of the scope of the rules. Ms. Peters advised that approximately 65 changes were made on 17 of the 25 rules and that most of those dealt with language, semantics or rule structure.

Ms. Peters went on to provide the Commission with a comparison of the state and federal definitions for an underground storage tank and advised that there were no implementation changes proposed. She advised that the Department would still regulate some aboveground piping systems (marinas, generators), still regulate releases from aboveground storage tanks, that it would still be the responsibility of the Department of Agriculture to inspect and oversee dispensers, and that it would still be the responsibility of DNR to oversee the cleanup of dispenser releases.

Ms. Peters went through each type of comment and provided individual responses for each issue. She reviewed the Department's position on each issue and described the EPA's requirement for each restriction with regards to our SPA.

Following her presentation Ms. Peters recommended that the Commission adopt all 25 Orders of Rulemaking, including modifications recommended by program staff for the 20 amended rules and the five new rules. She responded to questions posed by the Commissioners.

Commissioner Foresman made a motion to adopt the proposed changes to 10CSR26, with the revisions as presented. Commissioner Adams seconded the motion.

*A vote was taken; all were in favor, none opposed. Motion carried.*

4. RULEMAKING UPDATE

Mr. Tim Eiken, Director's Office, HWP, addressed the Commission and noted that most of the rulemaking effort had been focused on the UST rules. He noted that there were a couple of other rules being worked on. He advised that the adoption of federal rules was an ongoing process, the Definition of Solid Waste was still being reviewed, there were changes proposed to the Resource Recovery Program which had mandatory pieces for consideration and that there were pieces still needing to be cleaned up from the recent Hazardous Waste Generator rule package. He noted that this included reorganizing the rules into one area, fixing references and citation and new terminology with regards to Very Small Quantity Generator, Small Quantity Generator and Large Quantity Generator, which would allow for more flexibility.

He went on to state that the next step with the Tank Rules, following the previous vote by the Commission, was to provide them to the Joint Committee on Administrative Rules, a 30 day review and being sent to the Secretary of State.

Mr. Eiken then noted that the Missouri Risk Based Corrective Action (MRBCA) workgroup was still working on the proposed updates to those rules, and information would be presented to the Commission when they had something finalized.

No questions were posed by the Commission. This was provided as information only and required no other action on the part of the Commission.

5. LEGISLATIVE UPDATE

Mr. Tim Eiken, Director's Office, HWP, again addressed the Commission and noted that they were still watching one or two bills that contained subject matter that may impact the Department. He went on to state that the Drycleaners Environmental Response Trust (DERT) Fund was scheduled to sunset and that there was always a possibility that legislation may be filed to extend the fund.

No questions were posed by the Commission. This was provided as information only and required no other action on the part of the Commission.

6. FINANCIAL RESPONSIBILITY

Mr. Mike Martin, Compliance and Enforcement Section, provided the Commission with an update of the Hazardous Waste Program's (HWP's) progress on sites without a financial responsibility (FR) mechanism to cleanup releases from underground storage tanks (USTs) utilizing the expedited enforcement procedure.

He noted that Missouri law and regulation requires tank owners and operators to maintain FR so that they will have funds to take corrective action and compensate third parties for bodily injury and property damage if they have petroleum releases from their USTs. Recognizing the importance of this, the Hazardous Waste Management Commission approved the usage of an expedited enforcement procedure to address these facilities in August 2008. At that time,

of the 3,374 facilities required to have financial responsibility, 184 facilities lacked coverage. He noted that this equated to a 95% compliance rate.

Mr. Martin advised that as of November 29, 2016, of the 2,463 facilities required to have financial responsibility, 71 are currently without verified coverage. This equates to a 97% compliance rate.

And, he advised, as of November 29, 2016, of those 71 sites, 24 are currently at the Attorney General's Office for legal action, 14 are currently in the Enforcement Unit and 39 of those have had initial letters concerning their compliance. In addition, of those 71 sites currently without coverage, 34 currently have pending applications with the Petroleum Storage Tank Insurance Fund.

He ended by noting that the expedited enforcement process is a valuable tool, allowing the Compliance and Enforcement Section (CES) to keep pace with the tasks and responsibilities of ensuring compliance with FR.

No questions were posed by the Commission. This was provided as information only and required no other action on the part of the Commission.

#### 7. INFOGRAPHIC ON MISSOURI'S HAZARDOUS WASTE GENERATOR PROGRAM

Mr. David Green, Budget & Planning Section, HWP, provided the Commission with a PowerPoint presentation outlining how Missouri generators compared on a national level. He noted that the numbers were based on a report generated by the EPA and that Missouri comprised approximately 2.5 percent of the total national generators. He stated that Missouri had 15 TSD facilities and the 85 percent of the waste generated was sent to 2 kilns.

Mr. Green responded to a couple of questions from the Commission regarding the kilns and the types of wastes that were generated and ended his presentation.

No other questions were posed by the Commission. This was provided as information only and required no other action on the part of the Commission.

#### 8. LEGAL UPDATE

Ms. Brook McCarrick addressed the Commission and advised that she had no new legal issues to discuss at that time. She thanked the Commission and ended her portion of the agenda.

No questions were posed by the Commission. This was provided as information only and required no action on the part of the Commission.

#### 9. PUBLIC INQUIRIES AND ISSUES

The floor was opened to any public inquiries and no one addressed the Commission.

#### 10. OTHER BUSINESS

Mr. Steve Sturgess, Director, HWP, addressed the Commission and provided a brief review of other issues that may be of interest to them. He noted that the Tanks RBCA stakeholders and

workgroups were still holding meetings to update the Risk Based Target Levels and draft guidance documents were being prepared. He noted that the next meeting was scheduled in January. He advised that the Vapor Intrusion subgroup had met on December 8<sup>th</sup> and that the VI evaluation document was being distributed to the stakeholders for comment and input.

Mr. Sturgess then advised that pesticide collection events were being scheduled for 2017 and that 6 events were scheduled. He noted that they were anticipated to be held in Portageville, Fairfax, St. Peters, Sikeston, Chillicothe and Lockwood.

He then stated that the DERT Fund was scheduled to sunset in 2018 if there was no legislative renewal. He noted that there was no industry attempt to date and that there was a plan being developed to close out the fund, but advised that it was fairly complicated.

Mr. Sturgess noted that the EPA has completed its review of the Tanks Program and of PSTIF and that the draft report had been issued and received. He stated that comments and a response were being developed and a copy would be provided to the Commission when it was released by management. He noted that this was only a draft report and that the final report would follow. He went on to state that the EPA had ordered a joint plan be initiated within 45 days of the issuance of the final report. He noted that failure to comply, and some of the issues that were noted, could jeopardize the SPA.

No questions were posed by the Commission. This was provided as information only and required no action on the part of the Commission.

#### 11. FUTURE MEETINGS

It was noted that the next meeting was scheduled for Thursday, February 16, 2017. Chairman Aull advised everyone to have a Happy Holiday and a Happy New Year.

*Chairman Aull adjourned the meeting at 11:01 a.m.*

Respectfully Submitted,

\_\_\_\_\_  
Debra D. Dobson, Commission Assistant

APPROVED

\_\_\_\_\_  
Elizabeth Aull, Chairman

\_\_\_\_\_  
Date

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 3**

**Officer Elections**

**Recommended Action:**

The Commissioners to elect a Chairman and Vice-Chairman.

**Presented by:**

Hazardous Waste Management Commission

**Missouri Department of Natural Resources  
Hazardous Waste Management Commission  
Certification of Decision**

**DATE: April 20, 2017**

**On April 20, 2017, the members of the Hazardous Waste Management Commission held an election of officers.**

\_\_\_\_\_ was elected as Vice-Chairman by a majority vote.

\_\_\_\_\_  
Michael Foresman, Commissioner

\_\_\_\_\_  
Elizabeth Aull, Commissioner

\_\_\_\_\_  
Charles Adams, Commissioner

\_\_\_\_\_  
Jamie Frakes, Commissioner

\_\_\_\_\_  
Mark Jordan, Commissioner

\_\_\_\_\_

**Missouri Department of Natural Resources  
Hazardous Waste Management Commission  
Certification of Decision**

**DATE: April 20, 2017**

**On April 20, 2017, the members of the Hazardous Waste Management Commission held an election of officers.**

\_\_\_\_\_ was elected as Chairman by a majority vote.

\_\_\_\_\_  
Michael Foresman, Commissioner

\_\_\_\_\_  
Elizabeth Aull, Commissioner

\_\_\_\_\_  
Charles Adams, Commissioner

\_\_\_\_\_  
Jamie Frakes, Commissioner

\_\_\_\_\_  
Mark Jordan, Commissioner

\_\_\_\_\_

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 4**

**Rulemaking Update**

**Information:**

The Hazardous Waste Management Commission to be provided an update on recent rulemaking activities.

**Recommended Action:**

Information Only.

**Presented by:**

Mr. Tim Eiken – Rule Coordinator, HWP

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 5**

**Legislative Update**

**Information:**

The Commission to be provided an overview of recent legislation, which may impact the Missouri Department of Natural Resources, the Hazardous Waste Program or the Commission.

**Recommended Action:**

Information Only

**Presented by:**

Mr. Tim Eiken – Director’s Office, HWP

## **Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 6**

### **Tanks Financial Responsibility – Quarterly Update**

#### **Issue:**

This is an update of the Hazardous Waste Program's (HWP's) progress on sites without a financial responsibility (FR) mechanism to cleanup releases from underground storage tanks (USTs) utilizing the expedited enforcement procedure.

#### **Information:**

- Missouri law and regulation requires tank owners and operators to maintain FR so that they will have funds to take corrective action and compensate third parties for bodily injury and property damage if they have petroleum releases from their USTs.
- Recognizing the importance of this, the Hazardous Waste Management Commission approved the usage of an expedited enforcement procedure to address these facilities in August 2008.
- At that time, of the 3,374 facilities required to have financial responsibility, 184 facilities lacked coverage. A 95% compliance rate.
- As of March 27, 2017, of the 2,466 facilities required to have financial responsibility, 57 were without verified coverage. This equates to a 97.7% compliance rate.
- The expedited enforcement process has been a valuable tool to reduce the number of facilities without FR. In February to ensure the seriousness of the Notice of Violation was conveyed to the responsible party, the department began issuing Abatement Orders prior to referral to the Attorney General's Office.
- As of March 27, 2017, of those 57 sites, 20 were at the Attorney General's Office for legal action, 14 were in the Enforcement Unit and 9 of those have had initial letters concerning their compliance and 15 facilities have been issued Notices of Violation. In addition, of those 57 sites without coverage, 30 have applications pending with the Petroleum Storage Tank Insurance Fund.
- In addition, 33 sites have been referred to the Attorney General's Office since July 1, 2016. Since beginning the expedited referral process in 2008, 225 have been referred for legal action.

#### **Recommended Action:**

Information Only

#### **Presented by:**

Mike Martin, Chief, UST Compliance and Technology Unit, CES, HWP

## **Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017**  
**Agenda Item # 7**

### **Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri (Registry) Annual Report**

#### **Issue:**

The Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri (Registry) is maintained by the Missouri Department of Natural Resources pursuant to the Missouri Hazardous Waste Management Law, Section 260.440, RSMo. The Department publishes the “Missouri Registry Annual Report: Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites” and makes it available January 1 of each calendar year.

#### **Information:**

Detailed site information regarding Missouri hazardous waste sites is found in the Missouri Registry Annual Report. The Registry Annual Report is available to the public through the Department’s Hazardous Waste Program’s web site. Information about the sites is also found on the HWP’s interactive mapping system, known as Missouri E-Start (Environmental Site Tracking and Research Tool), that was created as part of the Department’s Long-Term Stewardship efforts. Additionally, the Department is required to send the Registry to the governing body of each county containing a site listed on the Registry. To minimize cost, only a CD copy of the Registry was sent to the Presiding Commissioner or County Executive of each applicable county. The Registry describes each listed waste site in detail, including: the location; public drinking water concerns; health advisory; geology/geohydrology; and remedial actions. As sites were listed on the Registry, an environmental notice that documents the hazardous waste contamination at the site was filed with the Recorder of Deeds. The use of a property listed on the Registry may not change substantially without the written approval of the Department.

The purpose of the Registry was to investigate and assess environmental and health conditions at sites where hazardous waste was either spilled or dumped prior to hazardous waste regulations. The Registry also set up a process that provided for the tracking of these sites to inform counties and future buyers of these properties of the environmental and health issues found at these sites.

According to state law, each site listed on the Registry is placed in one of the following categories:

- Class 1: Sites that are causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment. Immediate action is required.
- Class 2: Sites that are a significant threat to the environment. Action is required.
- Class 3: Sites that do not present a significant threat to the public health or to the environment. Action may be deferred.
- Class 4: Sites that have been properly closed and require continued management.

#### **Recommended Action:**

Information Only

#### **Presented by:**

Valerie Wilder – Site Assessment Unit Chief, Superfund Section

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 8**

**Long-Term Stewardship Update – Missouri Environmental Site Tracking And  
Research Tool (ESTART) Online Map**

**Issue:**

The Commission to be provided an update on recent changes that have been made to the ESTART online map.

**Information:**

The Long-Term Stewardship Unit recently updated the Missouri Hazardous Substance Site Locator both in name and content. The Commission to be provided an overview of the development steps, and a live demo of the ESTART map.

**Recommended Action:**

Information only.

**Presented by:**

Donald Cripe – Brownfields Voluntary Cleanup Section/Long Term Stewardship Unit, HWP

# Missouri Environmental Site Tracking And Research Tool (E-START) Update

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Don Cripe  
April 20, 2017

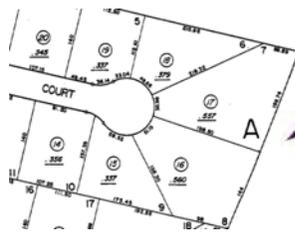
## Why Do We Need an Online Map?

- Records for thousands of sites that have been investigated or remediated
- Risk-based remediation: clean-up to level appropriate for future use
- Prevent disturbance of material left in place
- Knowing what is there and what uses are prohibited will help everyone make informed decisions

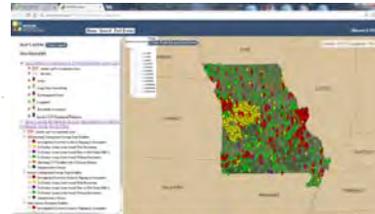
# Missouri Environmental Site Tracking And Research Tool (Missouri E-START)



**LOCATIONAL DATA**



**ONLINE  
INTERACTIVE MAP**



**DNR  
FACILITY FILES**



## Hazardous Waste Program Data to Display

### SMARS DATABASE

**3,507 Sites for Map**

2,007 VCP  
732 BA Sites  
214 Inactive Sites

616 Federal Facilities  
883 Superfund  
1 EPA Lead

### PERMITS DATABASE

103 Sites for Map

### TANKS DATABASE

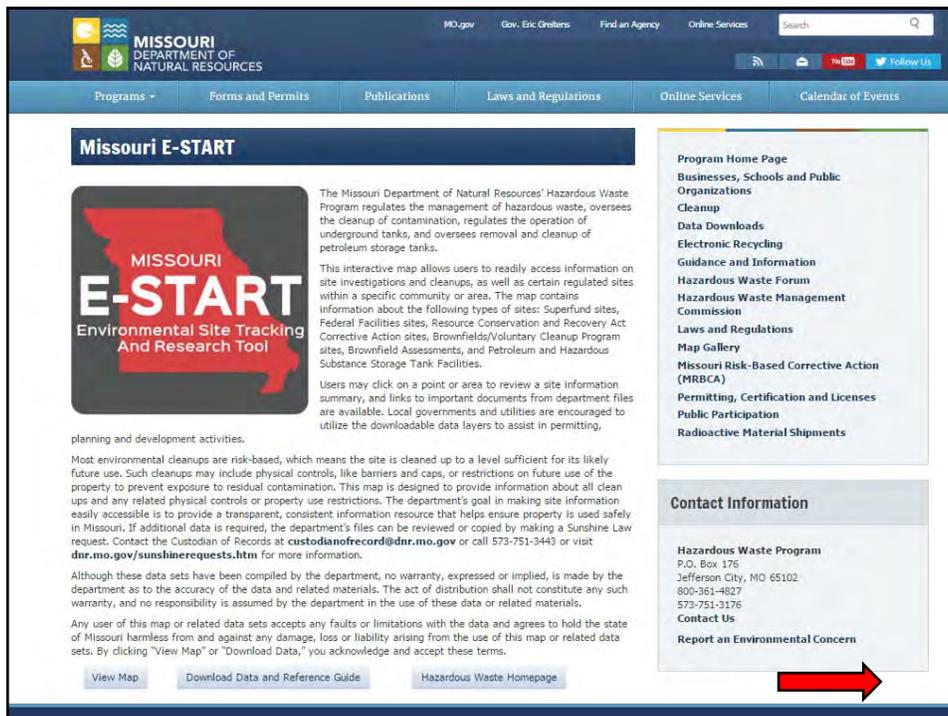
14,846 Facilities for  
Map

## Hazardous Substance Investigation and Cleanup Sites

-  Active
-  Long-Term Stewardship
-  Environmental Notice
-  Completed
-  Brownfield Assessment
-  Inactive VCP (Terminated / Withdrew)

## Tank Facility Categories

-  Investigation/Corrective Action is Ongoing or Incomplete
-  No Further Action Letter Issued with Restriction
-  No Further Action Letter Issued Prior to 2004 Tanks RBCA
-  No Further Action Letter Issued Without Restrictions
-  Operating UST Facilities with No Known Release
-  Other Reported Petroleum Facilities with No Known Release
-  Administrative Closure



The screenshot shows the Missouri E-START website. The header includes the Missouri Department of Natural Resources logo and navigation links for MO.gov, Gov. Eric Greitens, Find an Agency, and Online Services. A search bar is also present. The main navigation menu includes Programs, Forms and Permits, Publications, Laws and Regulations, Online Services, and Calendar of Events.

The main content area features the "Missouri E-START" title and a large graphic of the state of Missouri with "MISSOURI E-START Environmental Site Tracking And Research Tool" overlaid. To the right of the graphic, there is a detailed description of the program's purpose and an interactive map feature. Below the description, there are links for "View Map", "Download Data and Reference Guide", and "Hazardous Waste Homepage".

On the right side of the page, there is a sidebar with a list of program services and a "Contact Information" section. A red arrow points to the "Report an Environmental Concern" link in the sidebar.

**Missouri E-START**

The Missouri Department of Natural Resources' Hazardous Waste Program regulates the management of hazardous waste, oversees the cleanup of contamination, regulates the operation of underground tanks, and oversees removal and cleanup of petroleum storage tanks.

This interactive map allows users to readily access information on site investigations and cleanups, as well as certain regulated sites within a specific community or area. The map contains information about the following types of sites: Superfund sites, Federal Facilities sites, Resource Conservation and Recovery Act Corrective Action sites, Brownfields/Voluntary Cleanup Program sites, Brownfield Assessments, and Petroleum and Hazardous Substance Storage Tank Facilities.

Users may click on a point or area to review a site information summary, and links to important documents from department files are available. Local governments and utilities are encouraged to utilize the downloadable data layers to assist in permitting, planning and development activities.

Most environmental cleanups are risk-based, which means the site is cleaned up to a level sufficient for its likely future use. Such cleanups may include physical controls, like barriers and caps, or restrictions on future use of the property to prevent exposure to residual contamination. This map is designed to provide information about all clean ups and any related physical controls or property use restrictions. The department's goal in making site information easily accessible is to provide a transparent, consistent information resource that helps ensure property is used safely in Missouri. If additional data is required, the department's files can be reviewed or copied by making a Sunshine Law request. Contact the Custodian of Records at [custodianofrecord@dnr.mo.gov](mailto:custodianofrecord@dnr.mo.gov) or call 573-751-3443 or visit [dnr.mo.gov/sunshinerequests.htm](http://dnr.mo.gov/sunshinerequests.htm) for more information.

Although these data sets have been compiled by the department, no warranty, expressed or implied, is made by the department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.

Any user of this map or related data sets accepts any faults or limitations with the data and agrees to hold the state of Missouri harmless from and against any damage, loss or liability arising from the use of this map or related data sets. By clicking "View Map" or "Download Data," you acknowledge and accept these terms.

[View Map](#)   [Download Data and Reference Guide](#)   [Hazardous Waste Homepage](#)

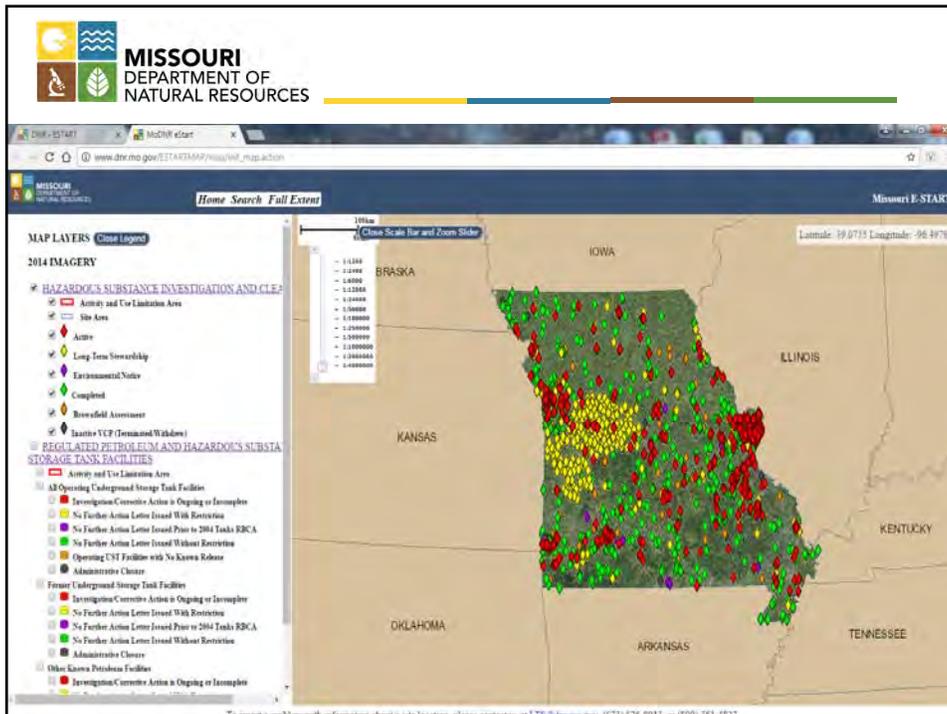
**Program Home Page**  
Businesses, Schools and Public Organizations  
Cleanup  
Data Downloads  
Electronic Recycling  
Guidance and Information  
Hazardous Waste Forum  
Hazardous Waste Management Commission  
Laws and Regulations  
Map Gallery  
Missouri Risk-Based Corrective Action (MRBCA)  
Permitting, Certification and Licenses  
Public Participation  
Radioactive Material Shipments

**Contact Information**

Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102  
800-361-4827  
573-751-3176  
[Contact Us](#)  
[Report an Environmental Concern](#)

## Downloadable Data Layers

Description	General Information	Google Earth Data Download	ESRI Data Download	CSV Format Data Download
Hazardous Waste Cleanup Sites	<a href="#">Hazardous Substance Reference Guide</a>	<a href="#">KMZ file</a>	<a href="#">Layer Package</a>	<a href="#">CSV</a>
Tank Site/Facilities	<a href="#">Tanks Facility Reference Guide</a>	<a href="#">KMZ file</a>	<a href="#">Layer Package</a>	<a href="#">CSV</a>
Tank Site/Facilities (Unmapped)				<a href="#">CSV</a>



**MISSOURI DEPARTMENT OF NATURAL RESOURCES**

MISSOURI DEPARTMENT OF NATURAL RESOURCES Missouri E-START

Address:  Street and City or Zip City:  --Zoom to City--

County:  --Zoom to County--

Zip:  --Zoom to Zip Code--

Site/Facility Name:  --Zoom to Site--

To report a problem with information about a site location, please contact us at [LT5@dnr.mo.gov](mailto:LT5@dnr.mo.gov), (313) 526-6913, or (800) 361-4627

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**

MISSOURI DEPARTMENT OF NATURAL RESOURCES Missouri E-START

Home Search Full Extent

Open Legend Open Scale Bar and Zoom Slide

Latitude: 38.3834 Longitude: -92.1761

**All Operating Underground Storage Tank Facilities**

**JAMES C KIRKPATRICK STATE INFO CENT**  
 Address: 600 WEST MAIN  
 City: JEFFERSON CITY  
 Zip: 65212  
 Status: Operating UST Facilities with No Known Release

**Sites Currently Displayed on Map**

Site Facility Name	Address	City	County	Status	Site Facility Status
CONVENIENT FOOD MART #1 COSOCO	426 BROOKS ST	JEFFERSON CITY	COLE	Operating UST Facilities with No Known Release	DNR, Hazardous Waste Program Tanks Section
DELONG'S INC - CULVERT	BROOKS AND E MILLER	JEFFERSON CITY	COLE	No Further Action Letter Issued Prior to 2004	DNR, Hazardous Waste Program Tanks Section
JAMES C KIRKPATRICK STATE INFO CENT	600 WEST MAIN	JEFFERSON CITY	COLE	Operating UST Facilities with No Known Release	DNR, Hazardous Waste Program Tanks Section
JOE MAGRUDER 66	CLAY AND MCCARTY ST	JEFFERSON CITY	COLE	No Further Action Letter Issued Prior to 2004	DNR, Hazardous Waste Program Tanks Section
MO DEPT OF TRANSPORTATION	200 HARRISON ST	JEFFERSON CITY	COLE	Investigation Corrective Action is Ongoing or Incomplete	DNR, Hazardous Waste Program Tanks Section

1 - 5 of 5 results

To report a problem with information about a site location, please contact us at [LT5@dnr.mo.gov](mailto:LT5@dnr.mo.gov), (313) 526-6913, or (800) 361-4627



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

Site/Facility Summary

Site Map

Operating UST Facilities with No Known Release



FACILITY INFORMATION	
Facility Identification Number	ST0020200
Facility Name	JAMES C. HOSFORD/STATE INFO CENT
Address	820 WEST MAIN
City	JEFFERSON CITY
ZIP	65102
County	COLE
Facility Type	All Operating Underground Storage Tank Facilities
Status	Operating UST Facilities with No Known Release
Summary	An operating UST facility, as defined by Section 315.100 RSMo is located at this location. The Department of Natural Resources is not aware of a release from this facility.
Lead Regulatory Agency	DNR/Hazardous Waste Program/Tanks Section

[Click here to download a PDF of this site](#)

To report a problem with information about a site location, please contact us at 1-800-MO-DOE or call (573) 526-8913, or (800) 361-4827



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES



Missouri  
Department of  
Natural Resources

## Missouri E-START Site/Facility Summary

This is an advisory about environmental conditions that could affect use of the property identified on the map below. Any property use limitations are intended to restore safe use of the property after the cleanup of contamination in the soil and/or groundwater. This advisory identifies the governmental agencies that oversee the site cleanup, and provides avenues for further information. Although this map and its underlying data sets have been compiled by the Missouri Department of Natural Resources (Department), no warranty, expressed or implied, is made by the Department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the Department in the use of these data or related materials.



**Facility Identification Number** ST0011917  
**Release Identification Number(s)** R002265 Active  
**Site/Facility Name** MO DEPT OF TRANSPORTATION  
**Address** 200 HARRISON ST  
**City** JEFFERSON CITY  
**Zip** 65101  
**County** COLE  
**Facility Type** Former Underground Storage Tank Facilities  
**Status** Investigation/Corrective Action is Ongoing or Incomplete  
**Summary** A petroleum or hazardous substance release is currently being addressed under the Missouri Risk-Based Corrective Action Guidance for Petroleum Storage Tanks. Please review the Department of Natural Resources site file for more information.  
**Lead Regulatory Agency** DNR/Hazardous Waste Program/Tanks Section  
**Contact Information** Long-Term Stewardship Unit  
 To report a problem with information about a site location, please contact us at [LTS@dnr.mo.gov](mailto:LTS@dnr.mo.gov), (573) 526-8913, or (800) 361-4827.

## Future Projects



Don Cripe, Chief  
Hazardous Waste Program  
Long-Term Stewardship Unit  
573-522-6774  
[don.cripe@dnr.mo.gov](mailto:don.cripe@dnr.mo.gov)

Map Link  
[dnr.mo.gov/molts](http://dnr.mo.gov/molts)

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 9**

**2017 Missouri Pesticide Collection Update**

**Issue:**

Pesticide Collection Program update.

**Information:**

- Commercial Pesticide Applicator Training highlights.
- Highlights from the first two pesticide collection events of 2017.
- Outreach activities.
- Outlook for 2017 collection events.

**Recommended Action:**

Information only.

**Presented by:**

C.J. Plassmeyer, Compliance and Enforcement Section

## Pesticide Collection Program Update

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C.J. Plassmeyer  
April 20, 2017

## Pesticide Collection Program

- Began in 2012, to provide pesticide collection events to farmers and households throughout Missouri
- Provide information to the public regarding proper disposal of pesticide waste
- Funded through a Department of Justice settlement with Walmart for Federal Insecticide, Fungicide, and Rodenticide Act Violations



## Commercial Pesticide Applicator Training

- Tony Pierce presented
- Pesticide Waste – Prevention, Disposal and Spills
- 2,061 participants attended training
- University of Missouri Extension and Missouri Departments of Agriculture, Transportation and Conservation provided training in specific areas



## First Collection of 2017

Portageville, March 11 from 8 a.m. to noon

- 27,855 pounds
- 22 participants
- Weather
- Advertising
- Container recycling
- Positive comments

## Portageville Collection



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Portageville Collection (Cont.)



## Second Collection of 2017

Fairfax, March 25 from 8 a.m. to noon

- 1,396 pounds
- Eight participants
- Rain
- Advertising
- Positive comments

## Fairfax Collection



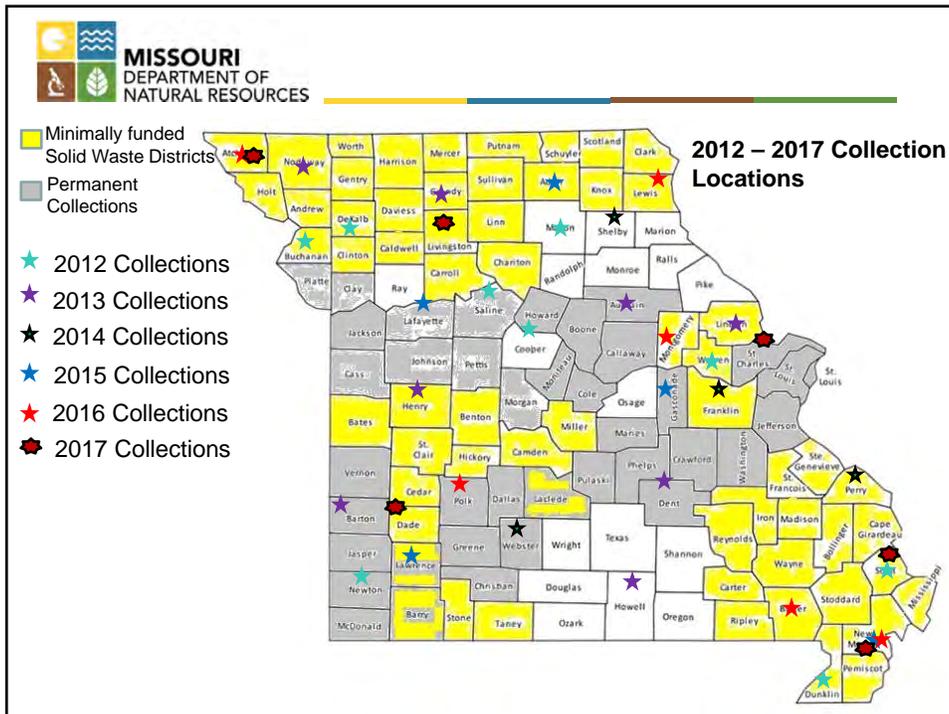
## Fairfax Collection (Cont.)



## Fairfax Collection (Cont.)



## Fairfax Collection (Cont.)



## New Display – Pesticide Waste Management



**Avoiding Pesticide Waste**

- Prevent pesticide from becoming waste by using it as the label indicates
- Purchase no more than a one year supply
- May be able to give unneeded product to others
- Use rinsate for dilution of next batch of like product
- Apply excess mixture on labeled site

**SHOPPING TIP: ONLY BUY WHAT YOU CAN USE IN A YEAR**

Check out the "Managing Pesticide Waste" fact sheet at: [dnr.ms.gov/pubs/pub258-1file](#)

Misapplication of pesticide can lead to environmental harms, such as fish kills

**Pesticide Waste Management**

Continuous storage of unneeded or unwanted pesticides leads to leaky containers, labels falling off, product becoming waste and costly disposal

**Disposing of Unwanted Pesticide**

- It is recommended to dispose of all waste pesticide as hazardous waste due to their toxicity
- Contact a licensed hazardous waste transporter for transport to a permitted treatment, storage and disposal facility
- Contact the Missouri Department of Natural Resources with questions about pesticide disposal at 573-751-7500

WHERE CAN I FIND A LICENSED HAZARDOUS WASTE TRANSPORTER?

WEBSITE: [dnr.ms.gov/ncw/ncw/transporters.php](#)

**Pesticide Best Management Practices**

- Do not store unwanted pesticide indefinitely
- Purchase the least toxic pesticide to get the job done
- Always follow the pesticide label
- Have emergency plan and spill kit on hand
- Use an impervious catch basin when rinsing application equipment and empty containers
- Never store diluted pesticide in the sprayer

**Pesticide Container Disposal**

- It is illegal to burn empty pesticide containers in Missouri
- Triple or pressure rinse container immediately after emptying
- Remove lid and puncture container before discarding
- Recycle if possible

RECYCLE PESTICIDE CONTAINERS THROUGH A LOCAL RECYCLING COUNCIL

WEBSITE: [acrecycle.org/](#)

## Missouri Pesticide Collection Program



from 2012 to 2016 —

**Missouri Pesticide Collection Program**

collected more than

**252,800** lbs

of **UNWANTED PESTICIDES**

— for proper disposal

Last updated March 21, 2017

The department's Pesticide Collection Program provides free collection events for farmers and households throughout the state of Missouri to properly dispose of unwanted waste pesticides. From 2012 to 2016, the Missouri Pesticide Collection Program has conducted 32 events, collecting more than 252,800 pounds of waste pesticide from 924 participants. In 2017, the department will again provide Missouri residents with a convenient, **free** opportunity to properly dispose of pesticides, herbicides, rodenticides and fungicides.

**NEW** Upcoming 2017 Collection Events

## Looking Ahead

- Four more collections this year
  - St. Peters
  - Sikeston
  - Chillicothe
  - Lockwood
- Outreach
  - Cole County Fair (Kid's Day)
- Sites for 2018

# Questions?

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 10**

**DRAFT Annual Electronics Manufacturing Recycling Report**

**Issue:**

The Manufacturer Responsibility and Consumer Convenience Equipment Collection and Recovery Act (260.1050 RSMo) requires manufacturers to provide an annual report with the amount of covered electronics they recycled from Missouri residents and the department is required to provide a report to the Legislature. The DRAFT report is with management for signature.

**Information:**

- Statutory requirements of the Act.
- Department actions.
- Data summaries.
- Projections.

**Recommended Action:**

Information only.

**Presented by:**

Tony Pierce, Environmental Specialist, Compliance and Enforcement Section.

Missouri Department of Natural Resources - March 2017  
A summary of the Annual  
Electronics Manufacturing Recycling Report



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

## **Introduction**

Senate Bill 720 (part of which is also known as the “Manufacturer Responsibility and Consumer Convenience Equipment Collection and Recovery Act”) was signed into law (E-Scrap Management Law) with an effective date of Aug. 28, 2008.

The E-Scrap Management Law requires manufacturers that sell equipment covered under the law in Missouri to implement "recovery plans" for the collection of and consequent recycling or reuse of their obsolete equipment. Covered equipment includes desktop, notebook or laptop computers, associated computer monitors or other display devices so long as they do not contain tuners and also the accompanying keyboards and mice associated with the computer of the same manufacturing brand. The recovery plans must specify how computers and computer accessories will be collected, recycled or reused at no cost to consumers. If a manufacturer does not have an approved plan, the law prohibits the manufacturer from selling its computers in Missouri. The manufacturers must also label their equipment to identify themselves as the manufacturer.

The E-Scrap Management Law requires manufacturers to submit annual reports to the department no later than January 31st of each year. The annual report includes a summary of the recovery program implemented by the manufacturer and the weight of covered computer equipment collected and recovered during the previous calendar year.

The department is required to compile the information submitted by the manufacturers and issue an annual electronic report to the House and Senate committees having jurisdiction over environmental matters. This report has been developed to fulfill the department’s reporting responsibility. This report is for the 2016 calendar year and includes data from the first partial year of the program (July 1, 2010 through December 31, 2010) combined with the entire calendar years of 2011, 2012, 2013, 2014, 2015, and 2016.

## **Background**

The E-Scrap Management Law was created as an effort to establish convenient and environmentally sound collection, recycling and reuse of electronics that have reached the end of their useful lives. This offers an opportunity to reduce the amount of e-scrap being sent to landfills. Disposing of computers and computer monitors in landfills is not only a waste of resources, it could be a threat to the environment because e-scrap contains hazardous materials such as lead, cadmium and mercury. More than 90 percent of computer contents can be reused or recycled.

The law assigned many duties to electronics manufacturers, retailers and the department. Prior to implementation, the first duty to be fulfilled by the department was to promulgate rules.

Upon passage of the E-Scrap Management Law, the department convened three Electronics Recovery Workgroup meetings to develop draft rules. The department completed the formal rulemaking process to implement provisions set forth in the E-Scrap Management Law with the rule becoming effective April 30, 2010. The rule required manufacturers to submit recovery plans to the department by July 1, 2010.

Under the law, retailers, manufacturers and the department share responsibilities, as follows.

### **Retailer Responsibilities**

Retailers of equipment defined in the law are not to sell, or offer for sale, a covered device in Missouri unless the manufacturer has submitted a recovery plan and received approval from department. In addition, retailers are not to sell or offer for sale a manufacturer's product if the manufacturer's brand label is not properly affixed.

### **Manufacturer Responsibilities**

Manufacturers who produce, sell or import covered devices in the state of Missouri must adopt and implement a recovery plan that provides reasonably convenient collection services for consumers. Recovery plans must be filed with and approved by the department and must explain how collection and recovery of covered electronic devices will be provided at no charge to the consumer. Collection methods must also be available, and designed, to meet the needs of all Missouri consumers. Covered electronic devices must be labeled with the manufacturer's brand, which must be permanently affixed and visible.

In addition, manufacturers with websites providing product information regarding covered devices must include collection and recovery information for consumers and provide that information to the department.

Manufacturers must submit annual reports to the department no later than January 31 of each year regarding the amount of recovered e-scrap devices they have recycled in Missouri.

### **Missouri Department of Natural Resources Responsibilities**

The department's role in administering the implementation of the E-Scrap Management Law included the following actions despite the challenges posed by the law allocating no funds/resources for the work and great challenges with currently existing and competing priorities.

[1.] The department adopted rules required to implement the requirements of the E-Scrap Management Law. Under the law, the department must adopt mandatory

standards for recycling or reuse of equipment. These standards can be either the standards set forth by the “Electronic Recycling Operating Practices” as approved by the board of directors of the Institute of Scrap Recycling Industries, Inc., or other standards issued by the U.S. Environmental Protection Agency. The department adopted both the institute’s standards and EPA’s “Responsible Recycling Practices For Use In Accredited Certification Programs For Electronics Recyclers.”

[2.] As required by the new rules, the department developed recovery plan submission forms and annual report forms with instructions for completion.

[3.] The department is required to educate consumers regarding the collection and reuse of equipment. This has been accomplished by establishing and maintaining a website to provide information about recycling and reuse of equipment including manufacturer’s recycling programs and recovery plans, and about computer equipment collection events (E-cycle Missouri Program).

[4.] The department is required to compile annual report information from manufacturers and issue an annual electronic report to the House and Senate committees having jurisdiction over environmental matters. This report is intended to fulfill that requirement.

[5.] The department must review and approve all manufacturer-submitted recovery plans and annual reports. The department has diligently worked with firms to produce compliant documents. As of the date of this report, 62 manufacturers have registered recovery plans, and Hazardous Waste Program Compliance and Enforcement Section staff have reviewed and approved all 62 plans. The department continues to work with any companies who may submit recovery plans for review and approval.

[6.] The department may conduct audits and inspections, take enforcement action, and assess penalties against a manufacturer, retailer or recycler. The department has conducted inspections of recyclers that have registered with the voluntary E-cycle Missouri program. At the time of this report, the department has not taken enforcement action, assessed penalties, or conducted audits in relation to this law. However, the department has issued one letter of warning and a subsequent notice of violation to one manufacturer for failure to submit annual reports. Continued failure to comply may result in the department’s first enforcement action under these regulations.

[7.] The department is also responsible for public education regarding collection and recovery of covered devices. To comply with this requirement, the department maintains a website with all requirements including additional links and information regarding recovery of covered devices.

### **Current Program Status**

As noted above, along with its initial responsibility to promulgate the e-scrap rule, the department is responsible for consumer education initiatives (e.g. E-cycle Missouri Program), reviewing and approving recovery plans, audits and inspections of recycling facilities, enforcement actions and reporting of annual recycling statistics. While the law ostensibly included a mechanism to fund the costs to administer the department's requirements, the funding source is dependent upon collected penalties, which is prohibited by the Missouri Constitution.

The Missouri Constitution (Article IX, Section 7) requires all proceeds from penalties be paid to the appropriate local school district. Therefore, the proceeds (if any existed) cannot be used for the administration of the program.

The lack of dedicated funding for these efforts creates some challenges to program implementation. However, the department will strive to implement the E-Scrap Management Law to the best of its ability given these resource constraints.

## A Summary of 2010 Annual Reports

During the six-month period between July 1 and December 31, 2010, a total of 20 manufacturers had approved recovery plans. These 20 manufacturers represented 35 brands. The manufacturers all submitted reports and recovered a total of 2,239,736 million pounds or nearly 1,120 tons of covered equipment. Since the collection period for 2010 was only six month, this is viewed as an encouraging amount of waste diverted from household waste, landfills and illegal dumping. Below is a chart with individual manufacturer annual reporting data.

<b>2010 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>34,415</b>
Apple	45,386
<b>ASUS</b>	<b>0</b>
Dell*	325,450
<b>Hannspree</b>	<b>0</b>
HP	610
<b>IBM</b>	<b>8</b>
IPSG	4,150
<b>Lenovo</b>	<b>0</b>
LG	1,008
<b>Medion</b>	<b>0</b>
NEC	15,500
<b>Nokia</b>	<b>0</b>
Panasonic	1,015
<b>Planar</b>	<b>0</b>
Samsung	1,495,083
<b>Sony</b>	<b>311,111</b>
Toshiba	1,500
<b>ViewSonic</b>	<b>4,500</b>
Wacom	0
<b>Total</b>	<b>2,239,736</b>

\*Dell accepts all brands in their takeback.

## A Summary of 2011 Annual Reports

During calendar year 2011 the department reviewed and approved recovery plans for another thirteen manufacturers. This brought the total number of manufacturers with approved recovery plans to 33, representing 53 brands. There were four manufacturers that submitted recovery plans but were not approved until the end of the calendar year. These four manufacturers were not required to submit reports for calendar year 2011. All but one manufacturer submitted an annual report. Manufacturers reported collecting a total of 2,130,597 million pounds or just over 1,065 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>2011 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>65,963</b>
Apple	34,406
<b>ASUS</b>	<b>4</b>
Barnes&Noble	0
<b>BenQ</b>	<b>0</b>
Coby	0
<b>Dell*</b>	<b>685,325</b>
Hannspree	0
<b>HP</b>	<b>243,520</b>
IBM	0
<b>IPSG</b>	<b>3,990</b>
Lenovo	0
<b>LG</b>	<b>56,773</b>
Medion	0
<b>Motorola</b>	<b>0</b>
MSI	0
<b>NEC</b>	<b>12,000</b>
Nokia	0
<b>Panasonic</b>	<b>2,887.5</b>
Planar	16
<b>Polaroid</b>	<b>0</b>
Premio	0
<b>RIM</b>	<b>0</b>
Samsung	489,812.5
<b>Sony</b>	<b>531,877</b>
Toshiba	23
<b>ViewSonic</b>	<b>4,000</b>
Wacom	0
<b>Total</b>	<b>2,130,597</b>

\*Dell accepts all brands in their takeback.

The following were not required to submit a report for 2011: BestBuy, Cyberpower, System76, Westinghouse. Fujitsu did not submit a 2011 report.

## A Summary of 2012 Annual Reports

During calendar year 2012 the department reviewed and approved recovery plans for another three manufacturers and reviewed updates for nine manufacturers. This brought the total number of manufacturers with approved recovery plans to 36, representing 57 brands. All registered manufacturers submitted an annual report. Manufacturers reported collecting a total of 1,985,411 million pounds or just over 992 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>Missouri 2012 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>74,323</b>
Apple	17,089
<b>ASUS</b>	<b>0</b>
Barnes&Noble	1
<b>BenQ</b>	<b>0</b>
BestBuy	377,151
<b>Coby</b>	<b>0</b>
Cyberpower	0
<b>Dell*</b>	<b>422,092</b>
Elo-Touch	0
<b>Fujitsu</b>	<b>0</b>
Hannspree	0
<b>HP</b>	<b>209,299</b>
IBM	2
<b>IPSG</b>	<b>23,400</b>
KOBO	0
<b>Lenovo</b>	<b>0</b>
LG	100,000
<b>Medion</b>	<b>0</b>
Motorola	0
<b>MSI</b>	<b>0</b>
NEC	10,000
<b>Nokia</b>	<b>0</b>
Panasonic	18,125
<b>Planar</b>	<b>160</b>
Polaroid	0
<b>Premio</b>	<b>0</b>
RIM	0
<b>Samsung</b>	<b>246,909</b>
Sony	479,000
<b>System76</b>	<b>0</b>
Toshiba	20
<b>ViewSonic</b>	<b>8,000</b>
Vizio	0
<b>Wacom</b>	<b>0</b>
Westinghouse	0
<b>Total</b>	<b>1,985,411</b>

\*Dell accepts all brands in their takeback.

## A Summary of 2013 Annual Reports

During calendar year 2013 the department reviewed and approved recovery plans for another three manufacturers and reviewed updates for 10 manufacturers. This brought the total number of manufacturers with approved recovery plans to 46, representing 67 brands. All registered manufacturers submitted an annual report. Manufacturers reported collecting a total of 3,329,360 million pounds or just over 1,330 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>Missouri 2013 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>87,463</b>
Apple	13,438
<b>ASUS</b>	<b>0</b>
Barnes&Noble	0
<b>BenQ</b>	<b>0</b>
BestBuy	366,374
<b>Coby</b>	<b>0</b>
Craig	0
<b>Cyberpower</b>	<b>0</b>
Dell*	605,598
<b>Elo-Touch</b>	<b>0</b>
Envision	0
<b>Fuhu</b>	<b>0</b>
Fujitsu	0
<b>Google</b>	<b>0</b>
Hannspree	0
<b>Hisense</b>	<b>0</b>
HP	226,034
<b>HTC</b>	<b>5</b>
IBM	0
<b>Infotel</b>	<b>0</b>
IPSG	250,00
<b>KOBO</b>	<b>0</b>
Lenovo	0
<b>LG</b>	<b>28,301</b>
Medion	0
<b>Microsoft</b>	<b>75,000</b>
Motorola	0
<b>MSI</b>	<b>0</b>
NEC	3,545
<b>Nokia</b>	<b>0</b>
Panasonic	0
<b>Planar</b>	<b>0</b>
Polaroid	0
<b>Premio</b>	<b>0</b>
RIM	0
<b>Samsung</b>	<b>1,495,094</b>
Sony	400,000
<b>System76</b>	<b>0</b>
Toshiba	8
<b>Verizon</b>	<b>0</b>
ViewSonic	3,500
<b>Vizio</b>	<b>0</b>
Vox	0
<b>Wacom</b>	<b>0</b>
Westinghouse	0
<b>Total</b>	<b>3,329,360</b>

\*Dell accepts all brands in their takeback.

## A Summary of 2014 Annual Reports

During calendar year 2014, the department reviewed and approved recovery plans for another 14 manufacturers and reviewed updates for 18 manufacturers. This brought the total number of manufacturers with approved recovery plans to 60, representing 89 brands. All registered manufacturers submitted an annual report. Manufacturers reported collecting a total of 2,214,602 million pounds, or just over 1,100 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>Missouri 2014 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
Acer	103,497
<b>Amazon</b>	<b>0</b>
Apple	7,087
<b>ASUS</b>	<b>4</b>
Barnes&Noble	2
<b>BenQ</b>	<b>0</b>
BestBuy	337,726
<b>Cellco</b>	<b>0</b>
Coby	0
<b>Craig</b>	<b>0</b>
Curtis	0
<b>Cyberpower</b>	<b>0</b>
Dell*	345,903
<b>Double Power Technology</b>	<b>0</b>
Elo-Touch	0
<b>Envision</b>	<b>0</b>
Fuhu	0
<b>Fujitsu</b>	<b>0</b>
Google	0
<b>Hannsprece</b>	<b>0</b>
Hisense	0
<b>HP</b>	<b>457,983</b>
HKC	0
<b>HTC</b>	<b>0</b>
iBuyPower	0
<b>IBM</b>	<b>0</b>
Infotel	0
<b>IPSG</b>	<b>51,500</b>
KOBO	0
<b>LeapFrog</b>	<b>0</b>
Lenovo	0
<b>LF Products</b>	<b>0</b>
LG	31,714
<b>Machspped</b>	<b>955</b>
Medion	0
<b>Microsoft</b>	<b>16,078</b>
Motorola	0
<b>MSI</b>	<b>0</b>
NEC	8,000
<b>Nokia</b>	<b>0</b>
Panasonic	0
<b>Planar</b>	<b>0</b>
Polaroid	0
<b>Premio</b>	<b>0</b>
RIM	0
<b>Russel Distribution</b>	<b>0</b>
Samsung	452,141
<b>Sony</b>	<b>400,000</b>
System76	0
<b>Tongfang</b>	<b>0</b>
Toshiba	8
<b>TMAX</b>	<b>0</b>
Verizon	1,132
<b>ViewSonic</b>	<b>880</b>
Visual Land	0
<b>Vizio</b>	<b>0</b>
Voxx	0
<b>Wacom</b>	<b>0</b>
Westinghouse	0
<b>Total</b>	<b>2,214,602</b>

\*Dell accepts all brands in their takeback.

## A Summary of 2015 Annual Reports

During calendar year 2015, the department reviewed and approved recovery plans for another 6 manufacturers and reviewed updates for 19 manufacturers. This brought the total number of manufacturers with approved recovery plans to 67, representing 104 brands. Not all registered manufacturers submitted an annual report. Manufacturers reported collecting a total of 2,227,903 million pounds, or just under 1,114 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>Missouri 2016 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>118,109</b>
Amazon	2,635
<b>Apple</b>	<b>12,801</b>
ASUS	0
<b>Barnes&amp;Noble</b>	<b>6</b>
BenQ	0
<b>BestBuy</b>	<b>337,029</b>
Cellco	1,003
<b>Coby</b>	<b>0</b>
Craig	0
<b>Curtis</b>	<b>0</b>
Cyberpower	0
<b>Dell*</b>	<b>208,998</b>
Digital Products	0
<b>Double Power Technology</b>	<b>0</b>
Elo-Touch	0
<b>Envision</b>	<b>0</b>
fuhu	0
<b>Fujitsu</b>	<b>0</b>
Google	0
<b>Hannspre</b>	<b>0</b>
Hisense	0
<b>HP</b>	<b>319,097</b>
HKC	0
<b>HTC</b>	<b>106</b>
iBuyPower	0
<b>IBM</b>	<b>0</b>
Infotel	0
<b>IPSG</b>	<b>57,000</b>
KOBO	0
<b>LeapFrog</b>	<b>3</b>
Lenovo	0
<b>LF Products</b>	<b>0</b>
LG	91,607
<b>Machspeed</b>	<b>0</b>
Medion	0
<b>Microsoft</b>	Did not receive report
Motorola	0
<b>MSI</b>	<b>0</b>
Nabi Cares	0
<b>NEC</b>	<b>N/A</b>
Nixeus	0
<b>Nokia</b>	<b>0</b>
Panasonic	0
<b>Planar</b>	<b>0</b>
Polaroid	0
<b>Premio</b>	<b>0</b>
RIM	0
<b>Russel Distribution</b>	<b>0</b>
Samsung	675,688
<b>Sceptre</b>	<b>0</b>
Sony	400,000
<b>System76</b>	<b>0</b>
Tongfang	0
<b>Toshiba</b>	<b>0</b>
TMAX	0
<b>Transcosmos</b>	<b>0</b>
Verizon	See Cellco
<b>ViewSonic</b>	<b>3,821</b>
Visual Land	0
<b>Vizio</b>	<b>0</b>
Vox	0
<b>Vtech</b>	<b>0</b>
Wacom	0
<b>Westinghouse</b>	<b>See Tongfang</b>
Zingarr	0
<b>Total</b>	<b>2,227,903</b>

\*Dell accepts all brands in their takeback.

## A Summary of 2016 Annual Reports

During calendar year 2016, the department reviewed and approved recovery plans for another 3 manufacturers and reviewed updates for 13 manufacturers. This brought the total number of manufacturers with approved recovery plans to 62, representing 109 brands. Not all registered manufacturers submitted an annual report. Manufacturers reported collecting a total of 889,502 pounds, or just over 355 tons of covered equipment. Below is a chart with individual manufacturer annual reporting data.

<b>Missouri 2016 Electronics Manufacturer Takeback</b>	
<b>Manufacturer</b>	<b>Pounds Recovered</b>
<b>Acer</b>	<b>15,344</b>
Amazon	2,466
<b>Apple</b>	<b>12,801</b>
ASUS	0
<b>Barnes&amp;Noble</b>	<b>0</b>
BenQ	0
<b>BestBuy</b>	<b>249,412</b>
Cellco	1,991
<b>Coby</b>	<b>0</b>
Craig	0
<b>Curtis</b>	<b>0</b>
Cyberpower	0
<b>Dell*</b>	<b>163,815</b>
Digital Products	0
<b>Double Power Technology</b>	<b>0</b>
Elo-Touch	0
<b>Envision</b>	<b>0</b>
fuhu	0
<b>Fujitsu</b>	<b>0</b>
Google	0
<b>Hannsprece</b>	<b>0</b>
Hisense	0
<b>HP</b>	<b>25,021</b>
HKC	0
<b>HTC</b>	<b>Have not received report</b>
iBuyPower	0
<b>IBM</b>	<b>0</b>
Infotel	0
<b>IPSG</b>	<b>24,547</b>
KOBO	0
<b>LeapFrog</b>	<b>0</b>
Lenovo	0
<b>LF Products</b>	<b>0</b>
LG	100,000
<b>Machspeer</b>	<b>0</b>
Mattel	0
Medion	0
<b>Microsoft</b>	<b>Have not received report</b>
Motorola	0
<b>MSI</b>	<b>0</b>
Nabi Cares	See Mattel
<b>NEC</b>	<b>N/A</b>
Nixeus	0
<b>Nokia</b>	<b>See Microsoft</b>
Panasonic	0
<b>Planar</b>	<b>0</b>
Polaroid	0
<b>Premio</b>	<b>0</b>
RIM	0
<b>Russel Distribution</b>	<b>0</b>
Samsung	284,098
<b>Sceptre</b>	<b>0</b>
Sony	10,000
TabletExpress	0
<b>TCT Mobile</b>	<b>0</b>
Tongfang	0
<b>Toshiba</b>	<b>7</b>
TMAX	0
<b>Transcosmos</b>	<b>0</b>
USA111	0
<b>ViewSonic</b>	<b>0</b>
Visual Land	0
<b>Vizio</b>	<b>0</b>
Voxx	0
<b>Vtech</b>	<b>0</b>
Wacom	0
Zingarr	0
<b>Total</b>	<b>889,502</b>

\*Dell accepts all brands in their takeback.

# Annual Electronics Manufacturing Recycling Report

---

Tony Pierce

April 20, 2017

## Overview

- History
- Current status
- Projections

## History

- Senate Bill 720 (part of which is also known as the “Manufacturer Responsibility and Consumer Convenience Equipment Collection and Recovery Act”)
  - Signed into law (E-Scrap Management Law) with an effective date of Aug. 28, 2008

## E-Scrap Management Law

- Requires manufacturers that sell covered equipment in Missouri to implement "recovery plans" for the collection and recycling or reuse of, their obsolete equipment

## E-Scrap Management Law (cont.)

- Recovery plans must specify how covered equipment will be collected, recycled or reused at no cost to consumers.
- If a manufacturer does not have an approved plan, the law prohibits the manufacturer from selling its computers in Missouri.

## E-Scrap Management Law (cont.)

- Covered equipment includes desktop, notebook or laptop computers; associated computer monitors; or other display devices, so long as they do not contain tuners.
- Tablets are included as a notebook or laptop computer.

## E-Scrap Management Law (cont.)

- The law requires manufacturers to submit annual reports to the Missouri Department of Natural Resources no later than Jan. 31st of each year.
- The department is required to compile the information submitted by the manufacturers and issue an annual electronic report to the House and Senate committees having jurisdiction over environmental matters.

## 2010 Summary

- 20 manufacturers
- 35 brands
- 2,239,736 pounds  
(~1,120 tons)

2010 Electronics Manufacturer Takeback	
Manufacturer	Pounds Recovered
<b>Acer</b>	<b>34,415</b>
Apple	45,386
<b>ASUS</b>	<b>0</b>
Dell*	325,450
<b>Hannspre</b>	<b>0</b>
HP	610
<b>IBM</b>	<b>8</b>
IPSG	4,150
<b>Lenovo</b>	<b>0</b>
LG	1,008
<b>Medion</b>	<b>0</b>
NEC	15,500
<b>Nokia</b>	<b>0</b>
Panasonic	1,015
<b>Planar</b>	<b>0</b>
Samsung	1,495,083
<b>Sony</b>	<b>311,111</b>
Toshiba	1,500
<b>ViewSonic</b>	<b>4,500</b>
Wacom	0
<b>Total</b>	<b>2,239,736</b>

## 2011 Summary

- 33 manufacturers
- 53 brands
- 2,130,597 pounds  
(~1,065 tons)

2011 Electronics Manufacturer Takeback	
Manufacturer	Pounds Recovered
Acer	65,963
Apple	34,406
ASUS	4
Barnes&Noble	0
BenQ	0
Coby	0
Dell*	685,325
Hannspre	0
HP	243,520
IBM	0
IPSG	3990
Lenovo	0
LG	56,773
Medion	0
Motorola	0
MSI	0
NEC	12,000
Nokia	0
Panasonic	2,887.5
Planar	16
Polaroid	0
Premio	0
RIM	0
Samsung	489,812.5
Sony	531,877
Toshiba	23
ViewSonic	4,000
Wacom	0
<b>Total</b>	<b>2,130,597</b>

## 2012 Summary

- 36 manufacturers
- 57 brands
- 1,985,411 pounds  
(~992 tons)

Missouri 2012 Electronics Manufacturer Takeback	
Manufacturer	Pounds Recovered
Acer	74,323
Apple	17,089
ASUS	0
Barnes&Noble	1
BenQ	0
BestBuy	377,151
Coby	0
Cyberpower	0
Dell*	422,092
Elo-Touch	0
Fujitsu	0
Hannspre	0
HP	209,299
IBM	2
IPSG	23,400
KOBC	0
Lenovo	0
LG	100,000
Medion	0
Motorola	0
MSI	0
NEC	10,000
Nokia	0
Panasonic	18,125
Planar	160
Polaroid	0
Premio	0
RIM	0
Samsung	246,909
Sony	479,000
System76	0
Toshiba	20
ViewSonic	8,000
Vizio	0
Wacom	0
Westinghouse	0
<b>Total</b>	<b>1,985,411</b>

## 2013 Summary

- 46 manufacturers
- 67 brands
- 3,329,360 pounds  
(~1,330 tons)

Missouri 2013 Electronics Manufacturer Takeback			
Manufacturer	Pounds Recovered	Manufacturer	Pounds Recovered
Acer	87,463	LG	28,301
Apple	13,438	Medion	0
ASUS	0	Microsoft	75,000
Barnes&Noble	0	Motorola	0
BenQ	0	MSI	0
BestBuy	366,374	NEC	3,545
Coby	0	Nokia	0
Craig	0	Panasonic	0
Cyberpower	0	Planar	0
Dell*	605,598	Polaroid	0
Elo-Touch	0	Premio	0
Envision	0	LG	28,301
Fuhu	0	RIM	0
Fujitsu	0	Samsung	1,495,094
Google	0	Sony	400,000
Hannspree	0	System76	0
Hisense	0	Toshiba	8
HP	226,034	Verizon	0
HTC	5	ViewSonic	3,500
IBM	0	Vizio	0
Infotel	0	Voxx	0
IPSG	25000	Wacom	0
KOBO	0	Westinghouse	0
Lenovo	0	Total	3,329,360

## 2014 Summary

- 60 manufacturers
- 89 brands
- 2,214,602 pounds  
(~1,100 tons)

Missouri 2014 Electronics Manufacturer Takeback			
Manufacturer	Pounds Recovered	Manufacturer	Pounds Recovered
Acer	103,497	Lenovo	0
Amazon	0	LF Products	0
Apple	7,087	LG	31,714
ASUS	4	Machspeer	955
Barnes&Noble	2	Medion	0
BenQ	0	Microsoft	16,078
BestBuy	337,726	Motorola	0
Cellco	0	MSI	0
Coby	0	NEC	8,000
Craig	0	Nokia	0
Curtis	0	Panasonic	0
Cyberpower	0	Planar	0
Dell*	345,903	Polaroid	0
Double Power Technology	0	Premio	0
Elo-Touch	0	RIM	0
Envision	0	Russel Distribution	0
Fuhu	0	Samsung	452,141
Fujitsu	0	Sony	400,000
Google	0	System76	0
Hannspree	0	Tongfang	0
Hisense	0	Toshiba	8
HP	457,983	TMAX	0
HKC	0	Verizon	1,132
HTC	0	ViewSonic	880
iBuyPower	0	Visual Land	0
IBM	0	Vizio	0
Infotel	0	Voxx	0
IPSG	51,500	Wacom	0
KOBO	0	Westinghouse	0
LeapFrog	0	Total	2,214,602

## 2015 Summary

- 67 manufacturers
- 104 brands
- 2,227,903 pounds  
(~1,114 tons)

Missouri 2015 Electronics Manufacturer Takeback			
Manufacturer	Pounds Recovered	Manufacturer	Pounds Recovered
Acer	118,109	Motorola	0
Amazon	2,635	MSI	0
Apple	12,801	Nabi Cares	0
ASUS	0	NEC	0
Barnes&Noble	6	Nixeus	0
BenQ	0	Nokia	0
BestBuy	337,029	Panasonic	0
Celco	1,003	Planar	0
Coby	0	Polaroid	0
Craig	0	Premio	0
Curtis	0	RIM	0
Cyberpower	0	Russel Distribution	0
Dell*	208,998	Samsung	675,688
Digital Products	0	Sceptre	0
Double Power Technology	0	Sony	400,000
Elo-Touch	0	System76	0
Envision	0	Tongfang	0
fuhu	0	Toshiba	0
Fujitsu	0	TMAX	0
Google	0	Transcosmos	0
Hannspre	0	Verizon	See Celco
Hisense	0	ViewSonic	3,821
HP	319,097	Visual Land	0
HKC	0	Vizio	0
HTC	106	Voxx	0
iBuyPower	0	Vtech	0
IBM	0	Wacom	0
Infotel	0	Westinghouse	See Tongfang
IPSG	57,000	Zingarr	0
KOBO	0	Total	2,227,903
LeapFrog	3		
Lenovo	0		
LF Products	0		
LG	91,607		
Machspeed	0		
Medion	0		
Microsoft	Did not receive report		

## 2016 Summary

- 62 manufacturers
- 109 brands
- 889,502 pounds  
(~355 tons)

Missouri 2016 Electronics Manufacturer Takeback			
Manufacturer	Pounds Recovered	Manufacturer	Pounds Recovered
Acer	15,344	Medion	0
Amazon	2,466	Microsoft	Have not received report
Apple	12,801	Motorola	0
ASUS	0	MSI	0
Barnes&Noble	0	Nabi Cares	See Mattel
BenQ	0	NEC	Have not received report
BestBuy	249,412	Nixeus	0
Celco	1,991	Nokia	See Microsoft
Coby	0	Panasonic	0
Craig	0	Planar	0
Curtis	0	Polaroid	0
Cyberpower	0	Premio	0
Dell*	163,815	RIM	0
Digital Products	0	Russel Distribution	0
Double Power Technology	0	Samsung	284,098
Elo-Touch	0	Sceptre	0
Envision	0	Sony	10,000
fuhu	0	TabletExpress	0
Fujitsu	0	TCT Mobile	0
Google	0	Tongfang	0
Hannspre	0	Toshiba	7
Hisense	0	TMAX	0
HP	25,021	Transcosmos	0
HKC	0	USA111	0
HTC	Have not received report	ViewSonic	0
iBuyPower	0	Visual Land	0
IBM	0	Vizio	0
Infotel	0	Voxx	0
IPSG	24,547	Vtech	0
KOBO	0	Wacom	0
LeapFrog	0	Zingarr	0
Lenovo	0	Total	889,502
LF Products	0		
LG	100,000		
Machspeed	0		
Mattel	0		

## Comparisons

- Missouri collects ~0.3 pounds per person
- Illinois: ~Three pounds per person
- Oklahoma: ~0.6 pounds per person
- Wisconsin: ~6.5 pounds per person
- Vermont: ~7.8 pounds per person

## Comparisons (cont.)

- Variables
  - Covered equipment
  - Infrastructure

## Projections

- As technology advances, the total pounds of electronic waste will continue to decrease
- Number of manufacturers will continue to decrease
- Number of brands will increase
- Cathode ray tubes will remain as a hazardous waste concern

## Questions?

Tony Pierce  
Environmental Specialist  
Hazardous Waste Compliance and  
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**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 11**

**Quarterly Report**

**Issue:**

Presentation of the July through September and the October through December 2016, Quarterly Reports.

**Recommended Action:**

Information Only.

**Presented by:**

Amy Feeler – Public Information, Division of Environmental Quality

# 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  
Mark E. Jordan

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

### For more information:

Missouri Department of Natural Resources

Hazardous Waste Program

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

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

Phone: 573-751-3176

Fax: 573-751-7869

Past issues of the Hazardous Waste Management Commission Report are available online at [dnr.mo.gov/env/hwp/commission/quarterlyreport.htm](http://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 1<sup>st</sup> through Sept. 30<sup>th</sup>. 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](http://oa.mo.gov/sites/default/files/FY_2017_Natural_Resources_Budget_Request_Gov_Rec.pdf).

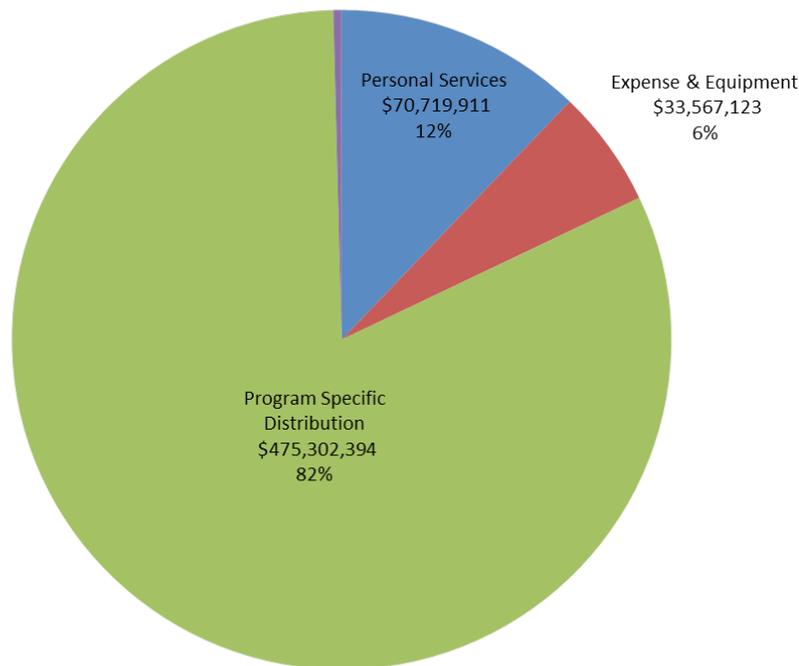
Each state agency is required to submit its completed budget request to the state budget director annually by Oct. 1. The governor may make changes to these requests in his recommended budget released in conjunction with the State of the State address in January.

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**

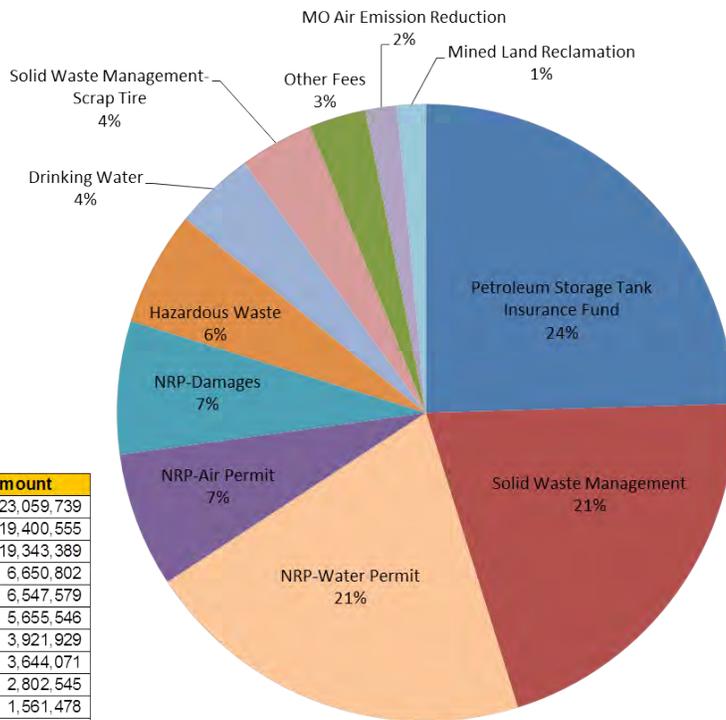
Appropriated GR  
Transfers \$2,368,274  
<1%



\*Includes appropriated General Revenue transfers

# Missouri Department of Natural Resources - Hazardous Waste Program

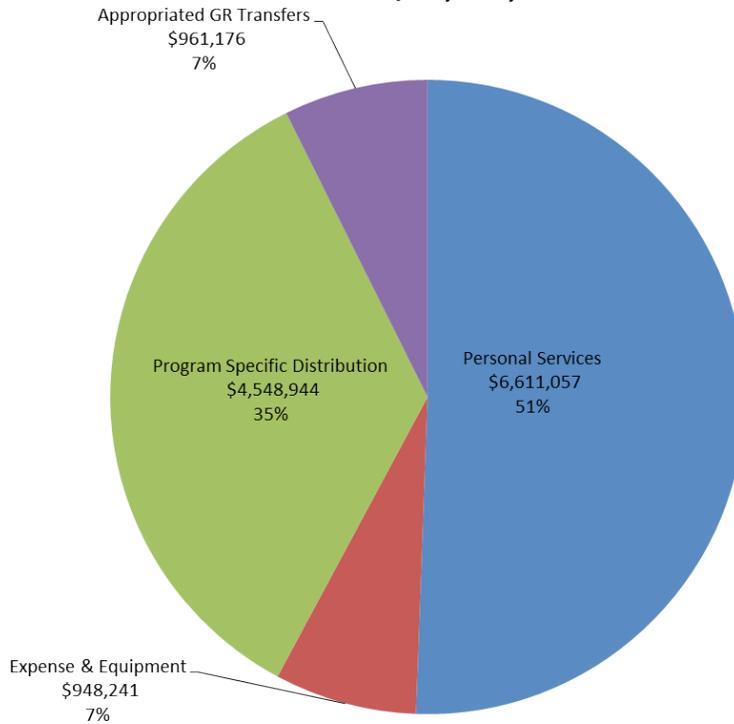
## FY 2017 Truly Agreed and Finally Passed DNR Budget - Environmental Fee Fund Appropriations \$93,976,480



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

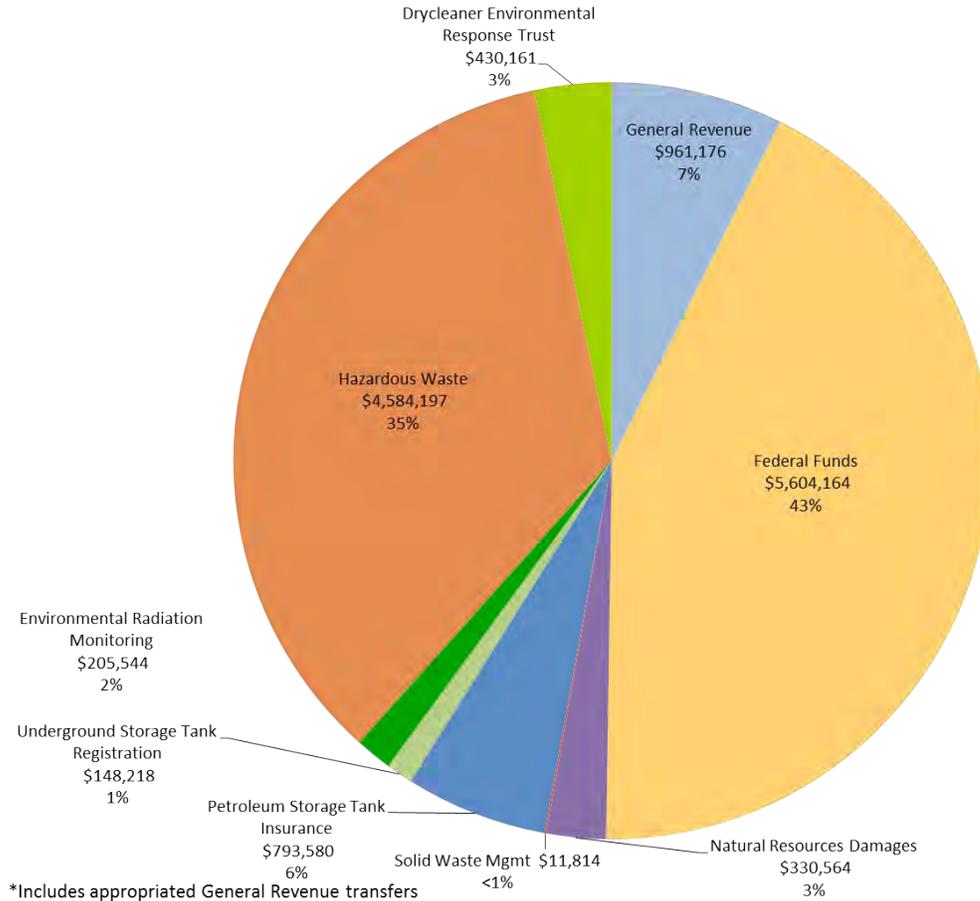
FY 2017 DNR Hazardous Waste Program and Petroleum Related Activities Truly Agreed and Finally Passed Operating Budget (HB6)\*

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](http://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](http://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](http://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/](http://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:

<b>Facility/Responsible Party</b>	<b>Summary of Violation</b>	<b>Resolution Summary and Compliance Status</b>
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

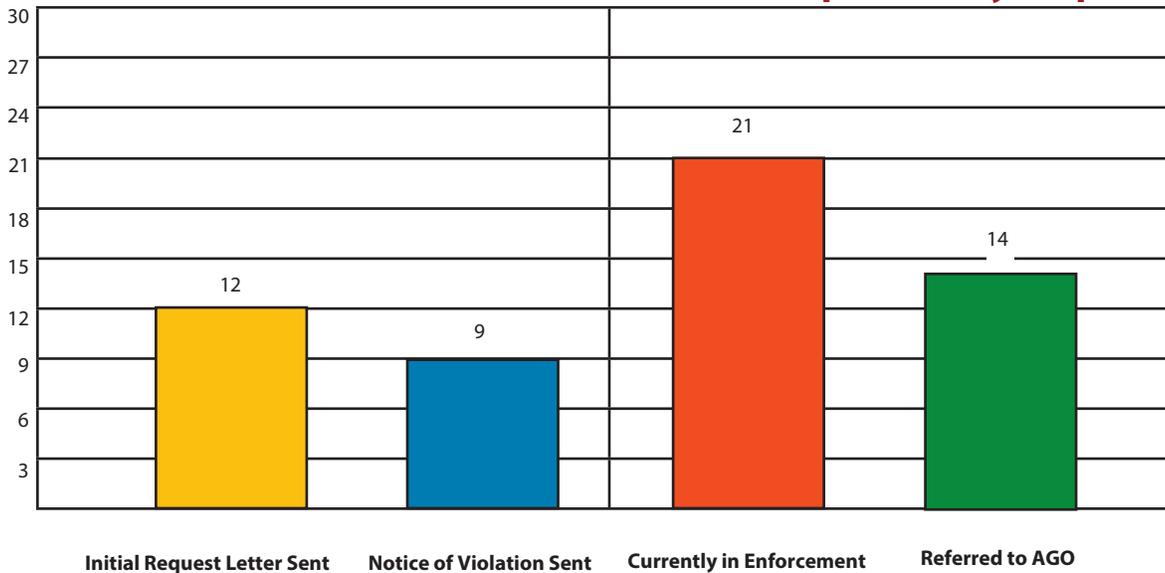
# ENFORCEMENT

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
<b>Total Number of Facilities with Unknown Financial Responsibility</b>	<b>56</b>

**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

<b>Staff Productivity</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>
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
<b>Facility Data</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>
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

<b>Underground Storage Tanks</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>	<b>All Yrs</b>
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

<b>Underground Storage Tanks</b>													<b>TOTAL</b>	<b>All Yrs</b>
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		
<b>Aboveground Storage Tanks</b>														
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		
<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	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		
<b>Unknown Source</b>														
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.

# Hazardous Waste Management Commission Report

October - December 2016

Quarterly Report



## **Hazardous Waste Management Commissioners**

Elizabeth Aull, Chair  
James "Jamie" Frakes, Vice Chair  
Charles "Eddie" Adams  
Michael Foresman  
Mark E. Jordan

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

### **For more information:**

**Missouri Department of Natural Resources**

**Hazardous Waste Program**

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

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

Phone: 573-751-3176

Fax: 573-751-7869

Past issues of the Hazardous Waste Management Commission Report are available online at [dnr.mo.gov/env/hwp/commission/quarterlyreport.htm](http://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 report covers the fourth quarter of the year from Oct. 1 through Dec. 31, 2016. This quarter has seen the culmination to our efforts to update and amend the Underground Storage Tank (UST) rules. From the public hearing in October through the Commission's affirmative vote in December, staff have continued to work with stakeholders to address questions and provide training on the new amendments. We appreciate the support of our stakeholders and the commission with this effort and believe it would not have been possible without the backing of both.

While legislative session does not begin until January 4, legislators may pre-file bills beginning on the first of December each year. Staff are continually tracking proposed legislation that could impact the department, in addition to providing information on a variety of environmental issues to our elected officials as questions arise.

Staff continue to work on the statutorily required five year review of rules, required by legislation passed in 2012. This legislation states 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. During this process, they are noting if the rule is necessary, continues to be necessary, is obsolete, overlaps other rules or has other conflicts. Staff continue to review our rules and propose the appropriate amendments that will clean up outdated language and references created by prior amendments to the rules, and to remove rules that are no longer required. The report on our rule review is due to the legislature by June 30, 2017.

As I announced at the December meeting, I will be leaving the Hazardous Waste Program (HWP) in early January to take a position with the department's Kansas City Regional Office. I have sincerely enjoyed my time with the program and working with the Hazardous Waste Management Commission. I am confident that whoever replaces me as Staff Director will bring the same level of concern for the issues we face. In the interim, Angie McMichael, Chief of HWP's Budget and Planning Section, has graciously agreed to serve as acting director until a replacement is selected. I commend each and every one of you for the dedication to the citizens of Missouri as you bring a variety of individual expertise to bear on the issues brought before the commission. I thank you for the commission's continued service to the state of Missouri and know that our environmental future is in capable hands.

Sincerely,



Steve Sturgess  
Director

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## 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” (COC) from the state.

Brownfields Voluntary Cleanup Program (BVCP) issued eight COCs for various sites from October through December 2016. This brings the total number of COCs issued to 848.

### Baker Petrolite/Webster Groves Owen Ridge, Webster Groves

The Baker Petrolite/Webster Groves Owen Ridge site is located at 369 Marshall Ave., Webster Groves. This portion of the Baker Petrolite site is to be transferred to Great Rivers Greenway for construction of a trailhead park. The park will serve as a bike trail extending east and west along Marshall Ave.

Based on historical information, no Baker Petrolite plant facilities were located on this parcel. Sampling of soil and shallow groundwater on the site found no significant contamination exceeding Missouri Risk-Based Corrective Action Guidance (MRBCA) unrestricted use target levels. No remediation was required. The department determined the site is safe for its intended use.



Trail Head Site Images  
Shady Grove and Deer Creek Trail



### Cedarwood Development, Kansas City

The Cedarwood Development site is located at 4990 NE Vivion Road, Kansas City. This property has been utilized for commercial retail use since the 1950s. Consisting of two separate parcels of land, the southeastern parcel previously consisted of a strip mall shopping center constructed in 1968. The second parcel of the subject property consists of a structure that housed various restaurants since 1950. In July of 2008, both parcels were redeveloped and are currently occupied by a 12,800 square foot single-story building surrounded by an asphalt parking lot. Missouri CVS Pharmacy, LLC leases the parking lot and operates as CVS Pharmacy #8555.

During an Environmental Assessment, chlorinated solvents consistent with dry cleaning activities were detected in soil and groundwater. During the process of redeveloping the site, workers excavated 4,905 tons of contaminated soil for off-site land disposal and removed 30,000 gallons of impacted groundwater

according to an approved Remedial Action Plan (RAP). Remedial activities concluded in May of 2008, during which four monitoring wells were installed to monitor the effectiveness of the remediation efforts. Between 2008 and 2010, seven groundwater sampling events were conducted. Chemical analysis of the groundwater indicates that contaminants were present in concentrations below MRBCA Tier 1 Risk-Based Target Levels (RBTLs) for non-residential use. The department determined the site is safe for non-residential use with a restrictive covenant.

## Union Station Power House Building, Kansas City

The Union Station Power House Building site is located at 500 W. Pershing Road, Kansas City. The Union Station Power House was developed around 1913 as a powerhouse to generate steam and electricity for Union Station and other nearby buildings. The powerhouse also operated steam shovels used in the construction of Union Station in 1914. Until approximately 1963, a rail siding was located along the south side of



the site, which facilitated the delivery of coal to a coal pit structure adjacent to the south side of the power house building. The use of the building as a power house stopped in the late 1960s or early 1970s, and has been unused and vacant since. The remediation work focused on the abatement and removal of lead-based paint (LBP) and asbestos.



Environmental site assessments conducted in 2008-2009 revealed the presence of contamination in soil and groundwater. Polycyclic Aromatic Hydrocarbons (PAHs), arsenic and lead were detected above non-residential standards in surficial soil. Lead was found to exceed the construction worker RBTLs. Even though tetrachloroethylene detected in the groundwater monitoring tested above the default target levels (DTLs), they stayed below residential standards. Thus, groundwater monitoring found the plume to be stable. MRBCA Tier 1 Risk Assessment was conducted in 2012 to evaluate potential exposure risks. An Operation and Maintenance (O&M) plan was put in place along with establishing a construction worker advisory for lead. No removal was conducted as the parking lot acts as a cap, preventing exposure to the impacted soil. The site qualifies for non-residential use with a restrictive covenant.

LBP and Asbestos Containing Material (ACM) inspections were also conducted. Windows, roof material and pipe insulation identified positive for ACM findings. LBP was found on walls, support columns and windows. The abatement of all materials identified as ACM or LBP occurred by the complete removal





and proper disposal from the property. The department determined the site is safe for its intended use.

The property was redeveloped to fit the needs of the Kansas City Ballet Company which includes the Kansas City Ballet School. Current use includes multiple studios for child to adult level classes and productions. Portions of the site also provide office space and meeting rooms for administrative and executive staff. Rooms and studio space may also be rented for private use.

## Calico Labs (former), Festus

The Calico Labs (former) site is located at 100 Industrial Drive, Festus. The 11.92 acre property is mostly consists of a 45,000 square-foot building and associated parking. The building was erected in 1992 and is constructed of concrete block and steel on a sealed concrete floor. A supplier of vending machine coin boxes occupied the property from 1992 until 2002. Since 2003, Calico Laboratories has bottled, labeled, packaged and distributed acetone and non-acetone based nail care products.

Acetone, lead, methyl ethyl ketone, carbon disulfide, p-isopropyltoluene and toluene were identified as possible contaminants from the products used by Calico Laboratories. Sixteen soil samples were collected and chemically analyzed for contaminant concentrations. Results show one soil sample contained acetone in concentrations above the MRBCA DTLs. Chemical analysis showed contaminant concentrations were below MRBCA DTLs from the groundwater samples collected at the nine monitoring wells drilled to a depth of approximately 19 to 24 feet. The potential risks associated with the site-use in soil and groundwater at the property were evaluated in regards to 2006 MRBCA residential use RBTLs for both current and potential future exposure scenarios. Results show that acetone and all other contaminant concentrations were below RBTLs for residential use for all current and future exposure pathways. The department determined the site is safe for its intended use.

**Sites in BVCP**

<b>Month</b>	<b>Active</b>	<b>Completed</b>	<b>Total</b>
October 2016	221	846	1067
November 2016	222	846	1068
December 2016	220	848	1068

**New Sites Received: 4**

**October**

O’Fallon Center, O’Fallon  
WireCo, St. Joseph

**November**

Mayview School, Mayview  
Kentucky Fried Chicken, St. Louis

**December**

None

**Sites Closed: 4**

**October**

Baker Petrolite/Webster Groves Owen Ridge OU,  
Webster Groves  
Cedarwood Development, Kansas City

**November**

None

**December**

Union Station Power House Building, Kansas City  
Calico Labs (former), Festus

### 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%
October - December 2016	119	110	92.44%

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	11	91.67%
October - December 2016	11	10	90.91%

#### 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
October - December 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
October	0	1	1
November	3	5	1
December	0	2	0

Month	Received	Under Review	Processed
October	\$0.00	\$16,042.00	\$9,323.00
November	\$40,775.85	\$92,297.20	\$44,315.26
December	\$0.00	\$37,694.60	\$0.00

Two reimbursement claims were processed during this period:

American Cleaners (Ballwin)	Ballwin	\$9,323.00
Tri-States Service Company-Boonville Ave.	Springfield	\$44,315.26

Total reimbursements as of Dec. 31, 2016: \$2,992,507.03

DERT Fund Balance as of Dec. 31, 2016: \$165,347.03

### 2016 - A Year in Review

Each year, the Permits Section coordinates with the U.S. Environmental Protection Agency (EPA) to prioritize activities at hazardous waste facilities subject to the section's oversight. Together, the section and EPA agree on general activity goals. The Performance Partnership Grant Work Plan, an overarching plan that covers the department's air, water and hazardous waste programs, lists the section's general activity goals. The Permits Section and EPA's hazardous waste staff also develop facility-specific current and future goals, which are contained in a related document called the Multi-Year Facility Planning Strategy (MYFPS). Together these two documents guide the section in planning resources and performing activities for the current and future federal fiscal years (FFY).

The MYFPS is a living document and includes goals the section and EPA anticipate accomplishing if all staff positions are filled and all projects go relatively smoothly. Projected tasks and project completion 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 routinely updates EPA about the status of the MYFPS goals based on the most recent information available and coordinates new projected completion dates with EPA for any delayed goals.

During FFY16, the section proactively filled the Outreach Planning and Stewardship Unit Chief Position (Planner III), a position within the unit, and redistributed duties. This was done for efficiency and in partial recognition of reductions in grant funding in FFY16, resulting from recent changes to EPA's grant funding formula. Despite funding cuts, EPA requested the state take over as lead agency for certain permit-related activities not previously identified in the MYFPS. This affected the section's ability to complete certain previously established MYFPS goals, which then had to be moved to future years.

At the end of each FFY, the section prepares a report for EPA, documenting progress on all planned and unplanned activities during that fiscal year. The report focuses mainly on permitting, corrective action and groundwater inspection and evaluation activities. The following information is from the FFY16 report, which summarized activities from Oct. 1, 2015, through Sept. 30, 2016.

### Hazardous Waste Permitting Activities

The section coordinated internally and with EPA on the priority of individual projects and tasks as dictated by the National Corrective Action Prioritization System and Overall Priority Ranking System ranking for each facility, as well as goals established by the federal Government Performance and Results Act of 1993 (GPRA). Facility rankings are occasionally adjusted to reflect current environmental and section/EPA project priorities. During FFY16, no facility rankings were adjusted, but certain priorities were adjusted to address the GPRA goals and the needs of our regulated facilities.

During FFY16, the section completed many permit-related activities and modifications not identified in the MYFPS that were important to the operation and economic viability of our regulated facilities. The value of permit modifications, related changes to agency workloads and case history examples of significant permit modifications not identified in the MYFPS in Missouri are highlighted in the January 2016 EPA publication: Permit Modifications Report: Safeguarding the Environment in the Face of Changing Business Needs. This report is available online at: [https://www.epa.gov/sites/production/files/2016-01/documents/permit\\_mod\\_report\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/permit_mod_report_final_508.pdf). The section completed the following permit-related activities:

- One emergency permit: Dyno Nobel
- One class 3 permit modification: Safety-Kleen Systems Springfield

- Three class 2 permit modifications: two to Exide Technologies and one to Doe Run Co. One class 2 permit modification request was denied for the Doe Run Co. due to inadequate public participation
- 11 class 1 permit modifications with prior director approval
- 17 class 1 permit modifications without prior director approval
- One closure plan modification: Doe Run Co.
- Five temporary authorizations issued: three to EBV/General Dynamics, one to BASF and one to Expert Management Inc.

During FFY16, the WM Lampracker Permit was terminated based on the completion of closure and corrective action. The section also made progress towards reissuing 16 hazardous waste management facility permits and completing two closures. Though not yet complete at the end of FFY16, the section was working on the following permit-related activities:

- Four class 3 permit modification requests
- One class 2 permit modification request
- Seven class 1 permit modifications with prior director approval

No hazardous waste permit reissuances were finalized during FFY16. The draft permit for the BFI Missouri City Landfill was issued for public review and comment on July 7, 2016. This permit is the first of its kind and includes RAP provisions for construction of an on-site leachate/groundwater treatment plant. Due to a request for a public meeting and approval of two comment period extension requests, the permit was not finalized in FFY16. The draft permit for the Boeing Hazelwood facility, and the accompanying statement of basis for the proposed final remedy, were delayed due to concerns raised by the permittee during their advance 10 day review. These two permits are scheduled to be finalized in FFY17.

**Corrective Action Activities**

During FFY16, progress was made on many corrective action activities related to site investigation, monitoring and remediation. The following are some of the highlights.

During FFY16, the section continued to work closely with EPA in an effort to improve the national Resource Conservation and Recovery Act (RCRA) corrective action process by implementing elements of its corrective action Project LEAN framework, now called RCRA Facility Investigation Remedy Selection Track (RCRA “FIRST”). The RCRA FIRST “Tool Box” represents a collection of principles and approaches that focus on identifying and eliminating non-value added activities in the corrective action process, in order to identify and eliminate process inefficiencies, barriers to progress and reduce costs, without compromising human health and the environment. Use of the LEAN framework and related tools continued at the former Zenith facility in Springfield; the Omnium facility in St. Joseph; and the former Amoco (now BP) Sugar Creek refinery in Kansas City.

EPA and the states developed the Environmental Indicator evaluation process together as a way to show progress in protecting human health and the environment and meet the performance and results objectives. The two environmental indicators are “Current Human Exposures Under Control” and “Migration of Contaminated Groundwater Under Control.” These indicators evaluate current environmental conditions, 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.

During FFY16, the section, in coordination with EPA, completed two Environmental Indicator evaluations: one for AK Steel and one for PM Resources. At both facilities, human exposures to contamination were determined to be under control. No contaminated groundwater migration evaluations were completed in FFY16. Currently, 58 of the 69 GPRA2020 baseline facilities have documented human exposures controlled; 52 have documented migration of contaminated groundwater controlled. A facility that fails to have an affirmative environmental indicator determination does not mean that human exposures or groundwater migration is occurring, but rather that the facility has not been evaluated yet or that more information is needed to make a determination.

During FFY16, no formal stabilization evaluations were conducted and the Permits Section did not impose any new interim measures on our regulated facilities. However, facility-proposed interim measures were reviewed and approved for Holcim and the closed BFI Missouri City landfill. The section approved several other work plans and reports for incremental/phased work done in support of longer-term corrective action investigation and cleanup goals at several facilities. A final remedy decision, another GPRA goal, for University of Missouri - Columbia was completed during FFY16. Final remedy construction, another high-priority GPRA goal, was completed at the University of Missouri - Columbia and WM Lamtracker Inc. - Kaiser; however, only the University of Missouri - Columbia was on the 2020 GPRA corrective action baseline list of facilities. The current number of facilities with final remedy construction is a cumulative total of 39 of 69 GPRA 2020 baseline facilities thru FFY16. Five additional GPRA goals (corrective action performance standards attained with or without controls) were achieved in FFY16 for:

- Safety-Kleen Springfield
- Safety-Kleen Cape Girardeau
- Safety-Kleen Independence
- Safety-Kleen Columbia
- WM Lamtracker Inc. - Kaiser (facility was not on the 2020 GPRA corrective action baseline list of facilities)

The current number of facilities with corrective action performance standards attained is a cumulative total of 19 of 69 GPRA 2020 baseline facilities thru FFY16.

Together, EPA and the states previously developed a format for facility Ready for Anticipated Use (RAU) determinations to document when facilities are ready for reuse, regardless of whether it is the current use or a future use. Preparing RAU documentation by the Permits Section is included in the current Performance Partnership Grant Work Plan with EPA, but not in the MYFPS document. The section continues to track RAU status and prepare RAU documentation for facilities during the corrective action process. During FFY16, the section completed RAU determinations for River Cement and WM Lamtracker Inc.

### Groundwater Activities

As part of the Performance Partnership Grant Work Plan, the state negotiates preparation of groundwater evaluations at selected hazardous waste facilities with EPA. These evaluations are conducted at post-closure and corrective action facilities with active groundwater monitoring programs and facilities with active and closed land disposal units, such as landfills and surface impoundments, where groundwater contamination is present or needs monitoring to detect releases. These evaluations come in two forms, the comprehensive groundwater monitoring evaluation (CME) and the O&M inspection. The CME is an overarching evaluation of the facility's groundwater monitoring systems and programs. The O&M

inspections, periodically performed as a follow-up to the CME, are focused on examining groundwater sampling plans, procedures and monitoring well maintenance issues. In each case, the section assesses compliance with the applicable groundwater monitoring regulations and permit or order conditions.

Five O&M reports have historically been scheduled for each FFY. Due to diminishing federal grant funding this number has recently been reduced to two O&M reports per year, starting FFY17. During FFY16, no CMEs were scheduled and no O&M reports were finalized. However, all fieldwork for the five O&M reports scheduled for FFY16 was completed. The associated reports were drafted but not finalized during FFY16. Similar to prior years, the delays in report finalization were the result of staff turnover and competing priorities. During FFY16, the section carried out advanced planning for the two O&M reports scheduled for FFY17.

In addition to O&M reports and CMEs, the section routinely performs a detailed review of groundwater monitoring reports submitted by our regulated facilities using an internal checklist. These reviews identify both minor and potentially significant deficiencies with report content or project issues. The section sends significant issues that might influence the representative nature of groundwater samples, data validity, regulatory compliance or project progress to the facility when discovered, rather than waiting until the next O&M report or CME. During FFY16, the section completed five formal groundwater monitoring report reviews using the checklist as well as many informal reviews.

### **Data Management Activities**

The section tracks, both internally and externally, all section activities and accomplishments. External tracking is done through EPA's Resource Conservation and Recovery Act Information (RCRAInfo) database.

The section typically enters data into RCRAInfo 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, the section reassesses the accuracy of historical state and EPA data. The section corrects errors found in state and joint database entries. If any errors are found in EPA's entries, they are forwarded to EPA's Missouri State Coordinator for reconciliation. The section continued its work with EPA's RCRAInfo Team on the RCRAInfo Data Quality Initiative to resolve issues brought to our attention by the team.

During FFY16, an EPA Office of Inspector General Report raised serious concerns regarding the quality of cost estimation and financial assurance data in RCRAInfo across the nation related to RCRA regulated activities. The section proactively reviewed the data for our Missouri facilities and pointed out to EPA several flawed assumptions used to come to the conclusions in the Inspector General's Report. After corrections were made based on these observations, Missouri demonstrated one of the lowest error rates of two percent among the 50 states related to this information.

### **Financial Assurance Activities**

Owners and operators of facilities actively handling hazardous waste as an interim status or permitted treatment, storage or disposal facility, and facilities with closure, post-closure care or corrective action obligations under other regulatory instruments (e.g., consent orders), are required to meet certain financial assurance and third party liability requirements. This ensures they will have enough funds set aside to close their facility, clean up any releases and compensate third parties for bodily injury or property damage resulting from those releases, even if the facility declares bankruptcy. The facility owners and operators submit closure, post-closure or corrective action plans to the department, as applicable, with cost estimates based on those plans and financial assurance instrument documents sufficient to cover those estimated costs.

Throughout the year, the section monitors the financial health of facilities required to provide financial assurance and conducts annual financial assurance reviews to make sure enough funding is available to cover the cost estimates for their activities. During FFY16, the section conducted 72 financial reviews, which included three Resource Recovery facilities in addition to our hazardous waste treatment storage and disposal facilities.

## Other Activities

During FFY16, the section provided technical support to other HWP sections and the Division of Environmental Quality on several occasions, regarding multiple sites and issues. This support included activities related to technical document review, site characterization, conceptual site models, groundwater plume stability evaluation, groundwater monitoring system adequacy, remedy design, groundwater data interpretation and natural resource damage evaluation.

During FFY16, significant time and resources were spent on several activities related to the Department of Energy/General Services Administration Bannister Federal Complex to coordinate externally and internally and ensure the public was informed. Time was spent reviewing; coordinating within the department, EPA and Department of Health and Senior Services, as needed; and approving documents required by the permit compliance schedule. The section also spent time reviewing and providing comments on multiple work plans and reports prepared by the preferred redevelopment partner, CenterPoint, and their consultants as part of their “due diligence” efforts aimed at future redevelopment of the federal complex.

During FFY 2016, time and resources continued to be devoted to following up on facility bankruptcy issues. Tasks included review, approval and reconciliation of proposed expenditures of trust fund monies recovered during bankruptcy and litigation proceedings to perform facility investigations, maintenance and monitoring. Section staff also provided post-bankruptcy information and technical support to department managers, legal staff, EPA and the Missouri Attorney General’s office regarding bankruptcy-related issues. These issues were related to the following facilities:

- City Environmental Inc. - Kansas City, Mo
- The Doe Run Co. Glover Smelter - Glover, Mo
- Greenfield Environmental Trust LLC (formerly Tronox) - Kansas City, Mo
- Greenfield Environmental Trust LLC (formerly Tronox) - Springfield, Mo
- Omnium LLC - St. Joseph, Mo
- West Star Environmental Inc. - Kingsville, Mo

During FFY 2016, the section provided substantial technical support to the department’s Natural Resource Damage efforts. Tasks periodically included reviewing reports; participating in scoping meetings; participating in monthly technical conference calls; public meetings; creating geographic information system (GIS) based maps; and preparing habitat equivalency analyses.

During FFY 2016, the section worked with EPA headquarters to assess workloads associated with permit modifications and steps to be taken to communicate the importance of permit modification work to EPA upper management and federal budget decision-makers. The section helped collect examples of beneficial permit modification work as part of EPA’s RCRA messaging initiative. The section also participated in discussions and made recommendations regarding RCRAInfo Version 6 redesign related to permit modifications, to make permit modification data entry into RCRAInfo easier and make certain data entry elements mandatory so states get national credit for permit modification work and support for continued RCRA program funding on the national level.

Section staff continued to routinely participate in state and national work groups and teleconferences, including:

- ASTSWMO Program Information Management (PIM) Task Force
- EPA Groundwater Forum
- EPA RCRA Permit Modification Work Group
- State “No Stricter Than” Hazardous Rulemaking Work Group
- RCRA Financial Assurance Work Group
- Monthly RCRA Permit Writers Teleconferences
- Monthly RCRA Combustion Teleconferences
- Monthly RCRA Reuse and Brownfields Prevention Teleconferences
- Monthly RCRA/TSCA Remediation Teleconferences
- Monthly RCRA Subpart X Teleconferences
- Monthly Regulatory Information Network Teleconferences
- RCRAInfo Change Management Process Financial Assurance Expert and Corrective Action Work Groups
- RCRAInfo Data Work Group

### **Permit Modifications List Available Online**

Businesses actively treating, storing (for longer than allowed by the hazardous waste generator regulations) or disposing hazardous waste in Missouri must get a hazardous waste permit. These permits contain operating and closure requirements for facilities actively managing hazardous waste. These permits may also contain post-closure, corrective action and financial assurance requirements. The department or facility can make changes to the permit throughout its life. Facility-initiated permit modifications are classified as Class 1, 2 or 3, depending on how much they change the permit conditions. Department-initiated permit modifications are not broken down by class. The value of permit modifications and some significant examples in Missouri are highlighted in the EPA publication Permit Modifications Report: Safeguarding the Environment in the Face of Changing Business Needs, available online at: [https://www.epa.gov/sites/production/files/2016-01/documents/permit\\_mod\\_report\\_final\\_508.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/permit_mod_report_final_508.pdf).

The department invites the public to review the list of approved hazardous waste permit modifications for the 2016 calendar year. The permit modification list for calendar year 2016 (and previous years) is available online at: [dnr.mo.gov/env/hwp/permits/publications.htm](http://dnr.mo.gov/env/hwp/permits/publications.htm).

## How Technology Facilitates Site Cleanup

HWP's Federal Facilities Section provides oversight cleanups of sites contaminated with hazardous substances across Missouri that are or were previously owned or operated by the U.S. Department of Defense, U.S. Department of Energy and other federal agencies and private entities. Contaminants at these sites vary and can range from oil; grease; chlorinated solvents to petroleum products; heavy metals; explosives; PAHs; and polychlorinated biphenyls (PCBs) to low-level radioactive waste; unexploded ordnance; munitions; chemical warfare material; and depleted uranium. Due to the unique nature of the contaminants and hazardous substances found at sites overseen by the Federal Facilities Section, diverse technologies have been used to facilitate cleanup goals.



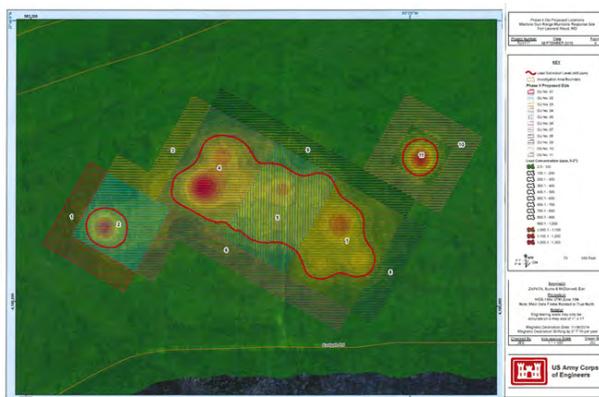
Depending upon the waste identified during site investigations and the media contaminated (air, soil, surface water or groundwater), cleanup methods and technologies are selected and employed to remediate hazardous substances to levels that are protective of human health and the environment. Some examples of technology used during federal facilities site cleanups are surveying, such as geophysical technology; modeling; sampling, assessment and monitoring techniques, such as x-ray fluorescence (XRF), camera technology and incremental sampling methodology (ISM); well sampling methods, such as Snap Samplers and passive diffusion bags (PDB); drilling methodologies such as direct push (Geoprobe) and sonic drilling; remedial technologies; and engineering controls, such as interceptor trenches, and stabilization and solidification. Another technology being utilized at federal facilities sites is phytoremediation, where trees are used to extract groundwater and trichloroethylene.



**XRF technology**, a type of sampling, assessment and monitoring technique, is used to identify metals present in soil and solid surfaces. When the XRF is pointed at a surface, it emits X-rays exciting electrons in atoms present in the sample being tested. The excited electrons release a unique photon of energy that can be used both to identify the metal and determine the amount of the metal in soil. The Federal Facilities section utilizes XRF technology to identify the presence of lead at firing ranges and mercury in wastewater trickling filters and small arms ammunition disposal areas.

The XRF is one of the only portable tools available to identify elemental composition in the field; its portability also makes it convenient to use and conserves time and money. It can be used as a screening tool or in lieu of taking samples, sending them to a lab for analysis and waiting for results.

Another example of a sampling, assessment and monitoring technique is **ISM**. ISM is a structured composite sampling technique being used in the environmental field to sample soil for contaminants. Commonly, 30 to 100 increments of soil are collected, combined, processed and subsampled, following specific protocols. The purpose for this sampling method is to obtain statistically reliable and reproducible sampling results with fewer samples. This in turn leads to better, more defensible decision making. ISM can require less effort and



fewer resources than traditional sampling methods, which makes it an innovative and valuable technology for sampling, assessment and monitoring purposes.

A final example of a sampling, assessment and monitoring technique is **camera technology**. It is used to go into confined spaces that are not safe or simply where people cannot fit, such as down pipes or wells, or through small openings. Cameras can be used to check for leaks or other hidden signs of issues needing to be addressed during cleanup. They provide a visual assessment where people cannot otherwise see.

One of the several new technologies used for well samplings is a **Snap Sampler**. It is a passive groundwater sampling device that seals-in groundwater samples in situ. The Snap Sampler frame holds Samplers that are open on both ends allowing groundwater to flow through. “Snap” end caps are opened and the Samplers are lowered into the sampling well to the required depth. To collect samples, the Snap Sampler bottles seal under the water surface with a manual or electronic trigger line. Volatile organic compounds (VOCs) are not lost during the sampling process because Snap Samplers are sealed at the point of sample. Snap Sampling can be significantly less expensive than the most common groundwater sampling method like low flow sampling.



Another well sampling technology is **PDB sampling** which is a passive groundwater collection technology used particularly for collecting VOCs in groundwater. A PDB sampler is a low-density polyethylene bag filled with deionized water. The deionized water acts like a semipermeable membrane, allowing VOC concentrations in the groundwater to equilibrate with the water within the bag. PDB samplers can also be significantly less expensive than low flow sampling.

**Direct push technology** is a drilling methodology used to identify subsurface geotechnical, geophysical, hydrogeological and analytical factors at a site. It also confirms or denies the presence of features believed to be below ground level. A machine is connected to a vehicle that pushes tools and sensors into the ground, eliminating the need for pre-drilling. Direct push is simpler, faster and less expensive than traditional drilling methods. It is often a replacement for traditional drilling or a screening tool to provide information to optimize traditional well placement. The weight of a vehicle and a small amount of vibration redistribute soil, allowing the tool to reach the desired soil depth. Direct push technology can be applied to provide screening level sampling results for soil, groundwater or vapors; inject substances used to remediate soil or groundwater; install temporary monitoring wells; and for many other applications.



There are several types of engineering controls, one such being **interceptor trenches**. These trenches are typically installed into a shallow aquifer and are used for controlling the migration of contaminated groundwater by capturing contamination or introducing remedial compounds into the groundwater. An interceptor trench can be as simple as a French drain type system or as complex as a deep horizontal well. In general, interceptor trenches are simply constructed and take advantage of other cost and time saving

new technologies, such as continuous trenching equipment, that make this technology an affordable choice in groundwater migration control. The continuous trenching method is used to install various types of vertical barrier walls. It has been developed to make the trenching and wall installation a single pass method significantly cutting time, cost and space required for trenching operations.

**Stabilization and solidification** is an engineering control that treats hazardous and radioactive substances. This treatment technology immobilizes hazardous environmental contaminants by mixing a reagent into contaminated soil or sediment, which binds to the contamination. Depending upon the reaction, contamination could either be rendered immobile or non-toxic. This type of treatment has a wide reaching effect as it can be used to treat a variety of hazardous substances; including metals, PAHs, PCBs and radiologically contaminated materials. It can be performed in situ or directly on excavated contaminated material.

Finally, **phytoremediation** is a form of bioremediation that employs the use of trees to remove, stabilize or destroy contaminants in soil and groundwater. There are two common uses for phytoremediation at federal facility sites. One is phyto-volatilization which is the process of plants taking up contaminated water and releasing the contaminants into the air through their leaves during transpiration. The other use is hydraulic control which uses the trees to remove water from a contaminated aquifer, thereby limiting contaminant movement with the groundwater.



### Examples of how these technologies are currently being used at federal facilities sites include:

- \* Tyson Valley Powder Farm uses geophysics for subsurface characterization and fate and transport studies, in situ chemical oxidation (using persulfate), passive no-purge sampling methods, segregations to reduce waste volumes (sifting and sorting small arms rounds from soil) and XRF sampling to guide excavations in real time.
- \* Lake City Army Ammunition Plant is using a permeable reactive barrier (PRB) and a combination of molasses and vegetable oil to create an in situ reductive zone to treat VOCs; stabilization and solidification using Portland cement for lead stabilization; and focused source soil removal using trench box excavation; and phytoremediation to limit groundwater flow to a PRB that was not performing under the original groundwater flow regime. Two thousand trees were initially planted to help remove water from the aquifer. The same trees may also be removing some of the VOC contamination before it reaches the PRB.
- \* ISM is used at Fort Leonard Wood to optimize the sampling and analysis for the department's munitions constituents investigations at closed ranges located on and around Fort Leonard Wood. ISM allows the department to regulate remedial decisions at these former range sites with heightened confidence over large areas with less sampling than would be required using discreet sampling. Overall, ISM leads to more accurate concentrations for use risk assessments; a better conceptual site model for remedy selection; and ultimately, better and more defensible remedial decisions.

Thanks to these new, diverse technologies, the department is able to help protect human health and the environment by remediating hazardous substances to appropriate levels.

## Regional Office Hazardous Waste Compliance Efforts

- Conducted 109 hazardous waste generator compliance inspections:
  - 18 large quantity generators
  - 42 small quantity generators
  - 38 conditionally exempt small quantity generators
  - One focused compliance inspection
  - Seven E-waste facilities
  - Three resource recovery facilities
- Issued 35 letters of warning and six notices of violation (NOVs) requiring actions to correct violations cited during the 109 inspections conducted
- Of the six NOVs issued, four included a referral to consider further enforcement action
- Conducted four compliance assistance visits at hazardous waste generators
- Received 12 citizen concerns regarding hazardous waste issues and conducted field investigations on 10 citizen concerns

## Special Facilities Unit

### *Commercial Facility Inspectors*

Special facilities inspectors conducted 12 inspections of commercial hazardous waste treatment, storage and disposal facilities.

### *PCB Inspector*

The inspector conducted 22 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*

Fifty-five 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](http://dnr.mo.gov/env/hwp/transporters.php).

## Hazardous Waste Enforcement Unit

### *Enforcement Efforts*

- Resolved five hazardous waste enforcement cases
- Received two new enforcement cases

### *Slaughters Cleaners, former (4164 LLC), St. Louis*

4164 LLC owns a property in St. Louis, which is the site of a former dry cleaning facility. Hazardous waste such as tetrachloroethylene was generated at this facility in the past; however, the property has been vacant since at least Jan. 29, 2014. During an inspection conducted on Jan. 29, 2014, the department observed suspected hazardous wastes on the property including an estimated 12, 15-gallon containers

and a variety of different kinds and sizes of containers of unknown materials. Based on the inspection, the department issued a letter of warning on April 8, 2014, for failure to determine if a waste is a hazardous waste. On Nov. 10, 2014, the department issued NOV #5657E for continued failure to address the issues. On April 22, 2015, the department conducted a case development inspection to observe the sampling of the materials in containers behind the building to determine if the waste was hazardous and make observations of any materials not previously documented. 4164 LLC declared that approximately 12, 15 gallon containers, numerous containers, floor residues, sludge and contaminated soil would be managed as a hazardous waste. Between April 2015 and March 2016, the department attempted to compel 4164 LLC to dispose of the hazardous waste.



On approximately March 18, 2016, 4164 LLC documented that approximately 2,400 pounds of hazardous waste was disposed. To prepare for the disposal, 4164 LLC had to register as a large quantity generator of hazardous waste. 4164 LLC failed to pay hazardous waste registration fees and to amend their generator notification forms to correctly reflect the facility's operations after disposal. To prompt resolution of these remaining issues, the department issued Administration Penalty Order (APO) #16-HWE-P002 for penalties and to correct remaining violations.

4164 LLC appealed APO #16-HWE-P002 with the Administrative Hearing Commission. Prior to the hearing, the department and 4164 LLC reached an agreement and APO #16-HWE-P002 was amended to contain the following terms. 4164 LLC agreed to a penalty of \$6,000 of which \$2,000 will be paid in four equal installments of \$500 beginning three months after the department's signature of the APO. The remaining \$4,000 will remain suspended, contingent on 4164 LLC's compliance with the Missouri Hazardous Waste Law for two years and with APO #16-HWE-P002. The corrective actions remained unchanged from the original APO.

### *Hutchens Industries Inc., Mansfield Facility, Mansfield*



On April 28, 2015, a compliance evaluation inspection was conducted at Hutchens Industries Inc., Mansfield Facility, in Mansfield. Hutchens Industries Inc., performs welding, cutting and painting of metal parts in the manufacturing of trailer and bus suspensions. On May 13, 2015, NOV #1619SW was issued noting six violations including: failure to update notification; failure to make a hazardous waste determination; and minor storage violations. A follow-up inspection on Aug. 31, 2015, and a phone call on Oct. 21, 2015, verified the violations had been corrected. Hutchens Industries Inc., agreed to amicably

resolve all claims the department might bring against the company by signing an Administrative Order on Consent including a penalty in the amount of \$1,500.00.

### **Pesticide Collection Program Activities**

Staff conducted training at the Missouri Green Industry Conference in St. Charles on Dec. 7, 2016, on how to properly dispose of unneeded pesticides and how to prepare for pesticide related emergencies.

Staff helped create a brochure *Pesticide Waste Management* (PUB 2701) that can be distributed at pesticide applicator training and other related outreach events. It can be found on the department's website at: [dnr.mo.gov/pubs/docs/pub2701.pdf](http://dnr.mo.gov/pubs/docs/pub2701.pdf).

#### ***Pesticide Collection Events***

Pesticide collection events have been scheduled for 2017.

1. Portageville, March 11, 2017, 8 a.m.-noon, University of Missouri – Fisher Delta Research Center, 147 W. State Highway T, Portageville, Mo 63873
2. Fairfax, March 25, 2017, 8 a.m.-noon, University of Missouri – Graves-Chapple Research Center, 29955 Outer Road, Fairfax, Mo 64446
3. St. Peters, June 3, 2017, 8 a.m.-noon, University of Missouri Extension Center – St. Charles County, 260 Brown Road, St. Peters, Mo 63376
4. Sikeston, June 24, 2017, 8 a.m.-noon, DeWitt Auction Co., 220 DeWitt Drive, Sikeston, Mo 63801
5. Chillicothe, July 15, 2017, 8 a.m.-noon, Litton Ag Center, 10780 Liv 235, Chillicothe, Mo 64601
6. Lockwood, Oct. 14, 2017, 8 a.m.-noon, 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](http://dnr.mo.gov/env/hwp/pesticide) for fliers.

### **UST Compliance and Technology Unit**

#### ***Federal rule changes***

In 2011, 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 rule includes 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 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 presented the final proposed rules at the Dec. 15, 2016, Hazardous Waste Commission meeting. The Commission voted to adopt the draft presented, which is available on our webpage. For the final draft, updates and information on these upcoming rule changes, please visit our webpage: [dnr.mo.gov/env/hwp/ustchanges.htm](http://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 Missouri Petroleum Storage Tank Insurance Fund (PSTIF) will also be accepting reciprocity from some of our neighboring states. The training program may be found on PSTIF's webpage: [optraining.pstif.org/intro/](http://optraining.pstif.org/intro/).

### *Tank Inspections*

The department inspections continue, including the new installation inspections, out of use sites and complaint/suspected leak investigations. In addition, the contract inspector continues to inspect operating UST facilities. 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 Compliance and Technology Unit staff and the Attorney General’s Office (AGO), the number of facilities without a verified financial responsibility mechanism is less than two percent.

### *Enforcement Efforts*

In this time period, 12 cases were referred to the AGO for enforcement action.

The following enforcement actions were taken in this quarter:

<b>Facility/Responsible Party</b>	<b>Summary of Violation</b>	<b>Resolution Summary and Compliance Status</b>
SPRMG LLC (dba Jefferson BP Gas Station) 3258 S Jefferson Ave. St. Louis, Mo	Financial responsibility violation.	Site referred to the AGO on Oct. 18, 2016, to pursue compliance and civil penalty.
Aanaser, Inc 9666 Watson Road St. Louis, Mo	Failure to have financial responsibility.	Site has corrected violation, the AGO is currently negotiating civil penalty.
Pleasant Hill Fast Stop 301 S 7 Highway Pleasant Hill, Mo	Financial responsibility, UST upgrade and cathodic protection violations.	Site referred to the AGO on Oct. 28, 2016, to pursue compliance and civil penalty.
Oakville Car Service 4390 Telegraph Road St. Louis, Mo	Financial responsibility and registration fees violations.	Site has paid registration fees. Referred to the AGO on Oct. 1, 2016, to pursue financial responsibility compliance and civil penalty.
Roadway BBQ 22051 Chevalier Road La Monte, Mo	Financial responsibility violation.	Site referred to the AGO on Oct. 18, 2016, to pursue compliance and civil penalty.
Pevely ZX 1999 Highway Z Pevely, Mo	Financial responsibility violation.	Site referred to the AGO on Oct. 28, 2016, to pursue compliance and civil penalty. Site returned to compliance on Dec. 16, 2016. Civil penalty being pursued.
Grab And Go Pearce 301 E Pearce Blvd. Wentzville, Mo	Financial responsibility and registration violations.	Site referred to the AGO on Oct. 28, 2016, to pursue compliance and civil penalty.
Howe Oil 100 E Orleans St. Pacific, Mo	Remedial action and failure to comply with Abatement Order violations.	Site referred to the AGO on Oct. 26, 2016, to pursue compliance and civil penalty.
Gills Quick Stop, LLC 7690 Hillsboro House Springs Road Hillsboro, Mo	Financial responsibility violation.	Site referred to the AGO on Oct. 18, 2016, to pursue compliance and civil penalty.

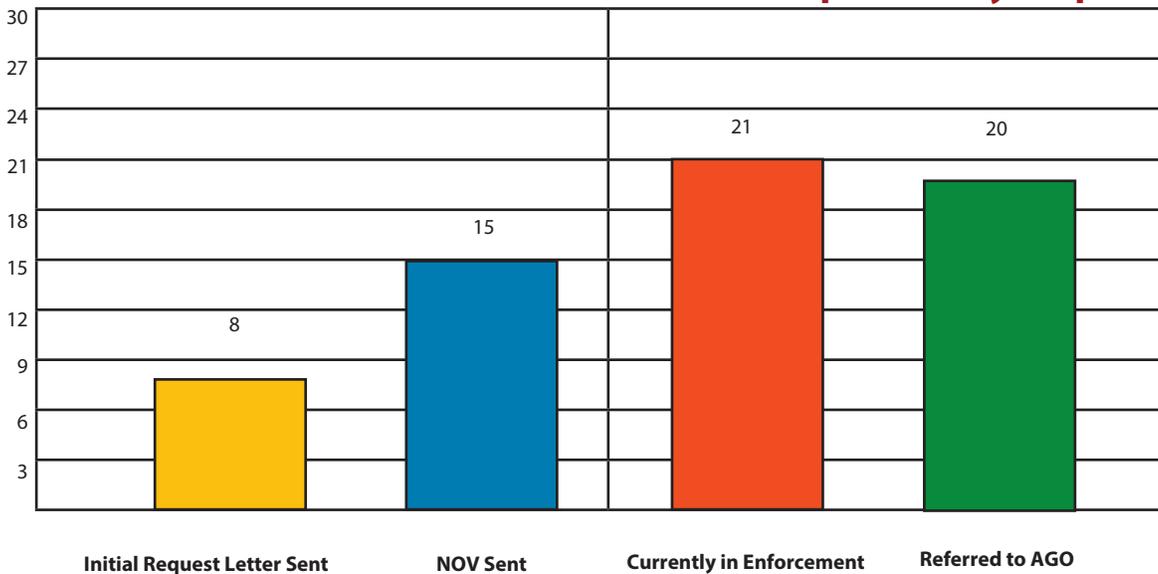
Conoco Convenience Plus 351 SE Third Street Lee's Summit, Mo	Financial responsibility, UST release detection and registration fee violations.	Site referred to the AGO on Nov. 7, 2016, to pursue compliance and civil penalty.
Everton Rt 2 Box 171 A Everton, Mo	Failure to permanently close out of use UST and registration fee violations.	Consent Judgment entered on May 19, 2015, with civil penalty imposed by the court. Site later sold for overdue tax purposes and information provided by the AGO indicated no ability to pursue civil penalty. Case closed and will focus future work with new owner of site.
Flash Market #381 1243 St. Louis St. West Plains, Mo	Financial responsibility violation.	Site referred to the AGO on Nov. 10, 2016, to pursue compliance and civil penalty.
Flash Market #332 240 State Hwy F Cardwell, Mo	Financial responsibility and registration violations.	Site referred to the AGO on Nov. 10, 2016, to pursue compliance and civil penalty.
Everyday Store #1070 17121 E 40 Hwy Independence, Mo	Financial responsibility, site assessment and permanent closure of out of use UST. Filed to conduct testing of vapor recovery system.	Global Consent Judgment entered on Dec. 14, 2016. Site established financial responsibility mechanism, but still needs to address outstanding closure issues.
Four Season Industries Inc. 403 E St. Parkville, Mo	Permanent closure and registration fee violations.	Consent Judgment entered on July 22, 2014. Responsible party removed USTs, but was financially unable to address all contamination. Responsible party filed bankruptcy and property was awarded to Park University.
Inner City Oil #2 801 Prospect Kansas City, Mo	Site not referred for UST violations, but was included in Global Consent Judgment. Failed to conduct testing of vapor recovery system.	Air Pollution Control Program Summary: Global Consent Judgement entered on Dec. 14, 2016. Terms included a \$31,000 penalty, of which \$11,000 will be fixed through a payment structure and \$20,000 of that suspended. Facility has returned to compliance.
Lazy Lee's One Stop #4 Hwy 5 and Marshfield St. Hartville, Mo	Financial responsibility violation.	AGO filed motion for voluntary dismissal as USTs had been emptied, therefore not requiring financial responsibility.
Liberty Harbor #1 Liberty Harbor Drive Portage Des Sioux, Mo	Failure to comply with out of use/permanent closure requirements, UST release detection requirements and registration fee violations.	USTs removed with additional remedial actions needed. Consent Judgment was entered on Dec. 16, 2016.
My River Home Boat Harbor 1545 Riverview Drive Portage Des Sioux, Mo	Financial responsibility violation.	Site referred to the AGO on Dec. 9, 2016, to pursue compliance and civil penalty.
Quick Stop 312 N Maguire Warrensburg, Mo	Financial responsibility violation. Failed to conduct testing of vapor recovery system.	Global Consent Judgment entered on Dec. 14, 2016. Site to maintain financial responsibility mechanism.
Rowlands Amoco 801 Mitchell St. Joseph, Mo	Permanent closure of USTs, registration fees, failure to maintain upgrades to UST violations.	Site sold and the new owner conducted permanent closure and received a No Further Action letter. Previous owner(s) not financially viable.
Sinclair Retail Station #24060 1617 W 75th St. Kansas City, Mo	Financial responsibility violation. Failed to conduct testing of vapor recovery system.	Global Consent Judgment entered on Dec. 14, 2016. Site to maintain financial responsibility mechanism.

High Ridge BP 2909 High Ridge Blvd. High Ridge, Mo	Financial responsibility, permanent closure and site assessment violations.	Consent Judgment entered on Dec. 17, 2015. Responsible party filed bankruptcy and property was acquired by the county for back taxes.
Star Foods Inc. PO Box 52 Winona, Mo	Financial responsibility, failure to comply with out of use requirements, permanent closure requirements and registration violations.	Responsible party filed for bankruptcy and site foreclosed on by the bank. Unable to further pursue enforcement actions as the responsible party no longer viable. Case closed.

## UST Facilities with Unknown Financial Responsibility Status Report

Financial Responsibility Status	Number of Facilities
Initial Request Letter Sent	8
NOV Sent	15
Currently in Enforcement	21
Referred to AGO	20
<b>Total Number of Facilities with Unknown Financial Responsibility</b>	<b>64</b>

### Number of Facilities in Each Financial Responsibility Step



## Annual UST Sources and Causes Report

The HWP's Tanks Section's Annual Public Record Report for the period of Oct. 1, 2015, through Sept. 30, 2016, is on the Tanks' section website at: [dnr.mo.gov/env/hwp/tanks/index.htm](http://dnr.mo.gov/env/hwp/tanks/index.htm). This report will also be made available by request to those without Internet access.

Subsection (c) of Section 1526 of the Energy Policy Act amended Section 9002 in Subtitle I of the Solid Waste Disposal Act to add requirements for states to maintain, update and make available to the public a record of underground storage tanks regulated under Subtitle I. EPA requires each state receiving funding under Subtitle I to meet the public record requirements. Subsection (d) of Section 9002 in Subtitle I requires EPA to prescribe the manner and form of the public record and says the public record of a state must include:

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

The first section of the report describes the number of UST facilities, individual regulated tanks, compliance rates in Missouri and an individual breakdown of the sources and causes of releases opened in federal fiscal year 2016.

- Three instances of physical or mechanical damage to piping.
- Nine instances of physical or mechanical damage to the piping area.
- Four instances of physical or mechanical damage to the dispenser area.
- One instance of physical or mechanical damage to the submersible turbine area.
- One corrosion related releases in the tank area.
- One corrosion related releases in the piping area.
- Two unknown tank or dispenser related issues.
- Seventy-one historical releases (unknown source). The unknown releases where a definitive source or cause of release was not able to be determined were discovered during:
  - Tank closure
  - Phase II investigations during property transactions
  - Other investigations

The website also includes reports on the sources and causes of UST leaks for previous years, beginning with 2008.

## Tanks Accomplishments for 2016

- Held the Ninth Annual UST workshop as part of the Missouri Waste Control Coalition Conference in July. The tanks workshop, held as a tract at the conference, featured department staff, along with private consultants providing training regarding the use of free product recovery and Light Non-Aqueous Phase Liquid conceptual site models.
- Tanks Section staff participated in the ASTSWMO Leaking UST and State Fund Meeting.

- Tanks staff continued to participate on a workgroup for the International Technology and Regulatory Council on Petroleum Vapor Intrusion.
- Compliance and Enforcement staff continue to be a member of the National Work Group on Leak Detection Evaluations.
- The Tanks Section continued participation on the ASTSWMO Emerging Fuels Task Force.
- The Tanks and Compliance and Enforcement Section provided technical assistance at the annual PACE convention.
- Continued an initiative on closing tank remediation sites that have been open for more than 20 years. The goal is to help provide additional information to the consultant to facilitate completion of these projects and help to achieve no further action status for these sites.
- Developed a draft free product guidance for staff to train staff. This document was forwarded to consultants for comments and will be finalized in 2017.
- The Tanks Section continued to work on the Tanks Backlog Plan.
- The Tanks Section completed the investigation of drinking water contamination in Marston.
- The Tanks Section, completed repairs to the private drinking water well in Buffalo.
- The Tanks Section continued to utilize funding to provide some overtime to staff to reduce turn-around times on document reviews. It continued to contract with one private contractor to provide state oversight of work on tanks sites. With these additional funds, Tanks estimate it can increase the number of cleanups using the MRBCA guidance and decrease turnaround times.
- The Budget and Planning Section continued to provide tracking of financial responsibility (FR) to identify all sites without FR. The Compliance and Enforcement Section continued to take actions to assure sites without FR would obtain coverage and to pursue penalties for sites that had not maintained FR. These actions helped maintain a high compliance rate of over 98% for facilities with acceptable FR.
- Continued to update tanks GIS data to conform with department standards and work to add tank facilities and cleanup sites to the department's Long Term Stewardship mapper. The mapper went live with tank sites in December 2016.
- Continued development of database enhancements and tracking systems.
- The Tanks Section continued to maintain an average turn-around time of 44 days that meets section goals.
- The Tanks Section was able to maintain a reduced turn-around time on closures - averaging less than 14 days
- The Compliance and Enforcement Inspection team conducted 184 new installation inspections. The inspection team also continues to maintain their training, often direct from the manufacturers, on proper installation of tanks, piping and other equipment.

- During calendar year 2016, the department accomplished the following work related to petroleum storage tanks:
  - Properly closed 423 tanks.
  - Reviewed 116 closure reports.
  - Approved 122 closure notices.
  - Conducted eight closure inspections.
  - Conducted three site investigations.
  - Responded to 18 emergencies involving petroleum releases.
  - Oversaw completion of 170 remediation sites.
  - Issued 392 certificates of registration.
  - A total of 87 new releases were reported during calendar year 2016.
  - Remediation staff received 2,348 remediation documents and generated 2,342 response letters.
  - Department staff were notified of 83 new installations at tank sites and received 43 new site registrations.
  - Compliance and Enforcement Section staff resolved 77 cases involving violations.
  - At the end of the 2016 calendar year, there were 121 active enforcement cases.
  - Financial responsibility compliance was at 98.1 percent. This number reflects insurance coverage from both PSTIF and other private policies and statements.
  - The department currently regulates 3,417 facilities with 8,890 active underground storage tanks.

# Missouri Department of Natural Resources - Hazardous Waste Program

## TANKS

### Petroleum Storage Tanks Regulation December 2016

<b>Staff Productivity</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>
Documents received for review	185	224	215	199	196	157	0	0	0	0	0	0	1,176
Remediation documents processed	151	218	226	186	175	118	0	0	0	0	0	0	1,074
Closure reports processed	3	18	15	13	6	7	0	0	0	0	0	0	62
Closure notices approved	12	11	11	14	5	10	0	0	0	0	0	0	63
Tank installation notices received	7	7	5	4	2	5	0	0	0	0	0	0	30
New site registrations	4	5	3	1	2	2	0	0	0	0	0	0	17
<b>Facility Data</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>
Total in use, out of use and closed USTs	41,146	41,170	41,191	41,216	41,226	41,236	0	0	0	0	0	0	
Total permanently closed USTs	32,217	32,253	32,287	32,317	32,335	32,346	0	0	0	0	0	0	
In use and out of use USTs	8,929	8,917	8,904	8,899	8,891	8,890	0	0	0	0	0	0	
Out of use USTs	721	702	693	699	979	674	0	0	0	0	0	0	
Total hazardous substance USTs	405	405	404	404	404	404	0	0	0	0	0	0	
Facilities with in use and out of use USTs	3,430	3,425	3,421	3,420	3,419	3,412	0	0	0	0	0	0	
Facilities with one or more tank in use	3,176	3,177	3,173	3,170	3,174	3,174	0	0	0	0	0	0	

### Closures

<b>Underground Storage Tanks</b>	<b>Jul-16</b>	<b>Aug-16</b>	<b>Sep-16</b>	<b>Oct-16</b>	<b>Nov-16</b>	<b>Dec-16</b>	<b>Jan-17</b>	<b>Feb-17</b>	<b>Mar-17</b>	<b>Apr-17</b>	<b>May-17</b>	<b>Jun-17</b>	<b>TOTAL</b>	<b>All Yrs</b>
Closure Reports Reviewed	3	18	15	13	6	7	0	0	0	0	0	0	62	
Closure Notices Approved	12	11	11	14	5	10	0	0	0	0	0	0	63	
Number of Tanks Closed (Closure NFA)	6	35	37	21	33	38	0	0	0	0	0	0	170	

### Cleanup

<b>Underground Storage Tanks</b>													<b>TOTAL</b>	<b>All Yrs</b>
UST release files opened this month	5	9	12	10	9	5	0	0	0	0	0	0	50	6,781
UST cleanups completed this month	4	19	16	7	18	10	0	0	0	0	0	0	74	6,048
Ongoing UST cleanups	797	787	782	786	777	772	0	0	0	0	0	0		
<b>Aboveground Storage Tanks</b>														
AST release files opened this month	0	1	2	1	0	0	0	0	0	0	0	0	4	491
AST cleanups completed this month	0	3	4	0	1	0	0	0	0	0	0	0	8	309
Ongoing AST cleanups	178	176	174	175	174	174	0	0	0	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	83
Cleanups completed-both UST & AST	0	0	0	0	1	1	0	0	0	0	0	0	2	56
Ongoing cleanups-both UST & AST	28	29	29	29	28	27	0	0	0	0	0	0		
<b>Unknown Source</b>														
Total release files-unknown source	0	1	1	0	0	0	0	0	0	0	0	0	2	230
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	17	17	17	0	0	0	0	0	0		
Documents Processed	151	218	226	186	175	118	0	0	0	0	0	0	1,074	

\* 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.

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 12**

**Legal Update**

**Issue:**

Routine update to the Commission on legal issues, referrals, filings, appeals, and any pending Administrative Hearing Commission cases.

**Information:**

Information Only.

**Presented by:**

Ms. Brook McCarrick, Office of the Attorney General

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 13**

**Public Inquiries or Issues**

**Issue:**

Opportunity for participants to speak to the Commission on relevant issues or matters before them.

**Information:**

Information Only.

**Presented by:**

Ms. Angie McMichael – Acting Director, HWP

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 14**

**Other Business**

**Issue:**

Update to the Commission on Program matters and other relevant issues.

**Information:**

Information Only.

**Presented by:**

Ms. Angie McMichael – Acting Director, HWP

**Missouri Hazardous Waste Management Commission Meeting**

**April 20, 2017  
Agenda Item # 15**

**Future Meetings**

**Information:**

**Meeting Dates:**

Date	Time	Location
Thursday, June 15, 2017	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, August 17, 2017	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, October 19, 2017	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, December 21, 2017	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, February 15, 2018	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, April 19, 2018	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101

**Recommended Action:**

Information Only.