



DRAFT

NOTICE OF OPEN MEETING

The meeting will also be streamed live from the Department's website at:
dnr.mo.gov/videos/live.htm.

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

October 17, 2013

**Department of Natural Resources, Hazardous Waste Program
Bennett Springs/Roaring River Conference Rooms
1730 E. Elm Street
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.

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 – Executive (Closed) Session, August 15, 2013 – Commissioners
Approval of Minutes – General (Open) Session, August 15, 2013 – Commissioners
*Final approval of amended minutes – General (Open) Session, from June 20, 2013

Action Items

3. Adoption of Orders of Rulemaking – Tanks Risk Based Corrective Action – Tim Chibnall, Director's Office, HWP

Information Only:

4. Rulemaking Update – Tim Eiken, Rule Coordinator, HWP
5. HB1251 – Rule Reviews – Report to the Commission – Tim Eiken, Director’s Office, HWP
6. 2012 Annual Drycleaning Environmental Response Trust Fund Report – Scott Huckstep, BVCP Section, HWP
7. Risk Based Target Levels – Tim Chibnall, Director’s Office, HWP
8. Quarterly Report – Dee Goss, Public Information Officer, DEQ
9. Legal Update – Kara Valentine, Office of the Attorney General
10. Public Inquiries or Issues – David J. Lamb, Director, HWP
11. Other Business – David J. Lamb, Director, HWP
12. Future Meetings
 - Thursday, December 18, 2013 – to be held at the Bennett Springs/Roaring River Conference Rooms, 1730 E. Elm Street Conference Center, Jefferson City, MO

Adjournment

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

Meeting Date: October 17, 2013

ROLL CALL ROSTER

	In Person:	By Phone:	Absent
Chairman Michael Foresman	_____	_____	_____
Vice-Chairman Deron Sugg	_____	_____	_____
Commissioner Elizabeth Aull	_____	_____	_____
Commissioner Jamie Frakes	_____	_____	_____
Commissioner Charles Adams	_____	_____	_____
Commissioner Andrew Bracker	_____	_____	_____

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 1

Pledge of Allegiance

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 2

Approval of Minutes

Issue:

Commission to review the Executive Session minutes from the August 15, 2013, Hazardous Waste Management Commission meeting.

Commission to review the General Session minutes from the August 15, 2013, Hazardous Waste Management Commission meeting.

**Commission to review amendment made to the June 20, 2013, General Session minutes; which were passed on pending amendment at the August 15, 2013, meeting.

Recommended Action:

Commission to approve the Executive Session minutes from the August 15, 2013, Hazardous Waste Management Commission meeting.

Commission to approve the General Session minutes from the August 15, 2013, Hazardous Waste Management Commission meeting.

** Commission to approve the General Session minutes from the June 20, 2013, Hazardous Waste Management Commission meeting, as amended.

GENERAL

SESSION

MEETING

MINUTES

GENERAL SESSION
HAZARDOUS WASTE MANAGEMENT COMMISSION
August 15, 2013; 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.

COMMISSIONERS PRESENT IN PERSON

Vice-Chairman Deron Sugg
Commissioner Elizabeth Aull

The phone line was opened at approximately 9:43 a.m. for Commissioners calling in to today's meeting.

COMMISSIONERS PRESENT BY PHONE

Commissioner Charles Adams
Commissioner Jamie Frakes

A Quorum was established at approximately 9:59 a.m.

Vice-Chairman Sugg called the General Session to order at approximately 9:59 a.m. and asked for a motion to go in to Executive Session. Commissioner Aull made the motion to go in to Executive Session, which was seconded by Commissioner Adams.

The Hazardous Waste Management Commission went in to Executive Session at 10:00 a.m.

Vice-Chairman Sugg called the General Session back to order at approximately 10:16 a.m.

A roll call was taken with Vice-Chairman Sugg, Commissioner Aull, Commissioner Frakes, and Commissioner Adams acknowledging their participation in today's meeting.

1. PLEDGE OF ALLEGIANCE

Vice-Chairman Sugg led the Pledge of Allegiance, and it was recited by the Hazardous Waste Management Commission (Commission) and guests.

2. APPROVAL OF MINUTES

- General Session minutes from the June 17, 2013, meeting:

Commissioner Aull provided an edit to the June 17, 2013, minutes, noting that during the officer elections that Mr. Bracker had asked that his name not be removed from consideration for the Vice-Chairman position. Vice-Chairman Sugg made a motion to approve the General Session minutes, after the changes were made that were suggested by Commissioner Aull, noting that a final vote would be taken at the October meeting. Commissioner Aull seconded the motion.

A vote was taken; all were in favor, none opposed. Motion carried. Minutes were conditionally approved pending changes and final vote at the October meeting.

3. PUBLIC HEARING – TANKS RISK BASED CORRECTIVE ACTION RULE – PROPOSED AMENDMENTS

Vice-Chairman Sugg addressed the Commission and attendees, calling the Public Hearing to order at 10:18 a.m., beginning with an opening statement:

“I hereby call this public hearing to order. A public hearing is not typically a forum for debate of the issues. Rather, the purpose of this hearing is to provide the Department of Natural Resources and the public an opportunity to present testimony on three proposed amendments relating to the risk-based corrective action process for underground storage tanks. A Notice of Public Hearing and a Notice to Submit Comments was published in the July 15, 2013, Missouri Register regarding these proposed rules.

At the request of the Commission, the Department will first present testimony on the proposed amendments. Following their testimony, the public will be given the opportunity to comment on the proposed rulemaking. A sign-up sheet is provided at the back of the room for anyone in attendance at the hearing, in addition to comment forms for those who wish to make any oral comments. Please fill out a comment form if you wish to be heard. This will aid us in recognizing speakers and calling them to testify. Additionally, we ask anyone who approaches the commission to testify to please state their name and affiliation, if any, for the record and provide a business card, if available, to the court reporter and to the commission secretary.

Written comments will also be accepted at this hearing. Please provide them to the Hazardous Waste Program’s Director, David Lamb. Following the conclusion of the hearing, comments may be submitted by mail to the Director of the Hazardous Waste Program, P.O. Box 176, Jefferson City, Missouri 65102. Comments submitted by mail must be postmarked on or before the end of the public comment period, August 22, 2013.”

Following the opening statement, Vice-Chairman Sugg introduced Mr. Tim Chibnall, Director’s Office, Hazardous Waste Program, to present the Department’s testimony.

Ms. Pamela S. Gentry, Midwest Litigation Services, served as court reporter for this meeting and Mr. Chibnall was sworn in.

Mr. Chibnall provided the Commission and attendees a PowerPoint presentation and began his testimony with noting that these proceedings pertained to only three of the Tanks rules, and that this presentation would cover the proposed amendments to those three rules. He noted that the Hazardous Waste Program (HWP) undertook the rulemaking in order to delete the December 31, 2012, deadline date for use of the Tanks Risk-Based Corrective Action guidance and to incorporate into rule by reference an updated version of the guidance. The guidance was updated based on meetings between DNR, the Petroleum Storage Tank Insurance Fund (PSTIF), and the Missouri Petroleum Marketers and Convenience Store Association (MPCA). He noted that this public hearing pertains both to the rule amendments themselves and the proposed changes to the Risk Based Corrective Action (RBCA) guidance. He advised that the most significant changes are to the guidance.

Mr. Chibnall began with a brief overview of the three rules affected and the reasoning for the proposed amendments. He started with noting that there were updates to the guidance, which he would present as Specific Changes and Less Specific changes. He went on to state that the proposed guidance changes were those agreed to by DNR, the PSTIF and the MPCA, and that the most significant change is an update of the Risk-Based Target Levels (RBTLs). He stated that the updated RBTLs are those from the 2009 proposed rules and that the changes to the RBTLs were due to changes in toxicity factors, new methodology pertaining to dermal contact with contaminants, and some new physical/chemical factors. He explained that changes in soil geotechnical data collection are intended to result in more representative samples, and that the changes concerning ethylene dibromide (EDB) and ethylene dichloride (EDC) pertain to the specific circumstances under which the contaminants must be analyzed for and the specific analytical methods that must be used. He advised that the polynuclear aromatic hydrocarbons (PAH) sampling requirements added to the guidance were previously found in a fact sheet. The content of that fact sheet is being incorporated into the guidance.

He went on to state that the guidance has been updated to explicitly allow soil vapor sampling at both Tier 1 and Tier 2, and that in this regard, the updated Tier 1 RBTL tables now include soil vapor target levels. Mr. Chibnall advised that with regards to the groundwater Domestic Use exposure pathway, the changes require more thorough documentation to support conclusions regarding the likelihood that groundwater zones will or will not be used for drinking water, and clarify that clear conclusions and thorough documentation of information used to reach conclusions are required.

Mr. Chibnall continued his testimony, noting that the initial 2004 guidance included reporting forms. These forms quickly became difficult to use when the soil type dependent Tier 1 RBTLs were developed and put into use in 2005. With this update, the guidance states that the reporting forms need no longer be used, though they may be on a voluntary basis.

Mr. Chibnall further explained that language has been added to both the updated guidance and the proposed rules to explain that tank owners and operators may continue to use the 2004/2005 guidance if they have submitted a work plan for investigation, risk assessment, or corrective action; the Department has approved the plan; and the plan is implemented within

one year of approval. He noted that if these conditions are not met, the owner/operator must use the 2013 guidance and, in every case, owners and operators may elect to use the 2013 guidance even if they have previously or are currently applying the 2004/2005 guidance. Finally, he stated that the guidance has been revised to explicitly require that Tier 2 or Tier 3 target levels be applied even if they are lower than the Tier 1 RBTLs.

Mr. Chibnall then provided slides that showed the proposed changes to the three rules, along with an explanation of each change.

- 10 CSR 26-2.062 Assessing the Site at Closure or Change in Service.
 - Amend to stipulate that discovery of contaminants at concentrations above the Default Target Levels (DTL) triggers site investigation and corrective action
 - Remove reference to 2004/2005 guidance
 - Incorporate by reference the 2013 version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a written procedure

Mr. Chibnall noted that 2.062 pertained to tank closures, and that under this proposed amendment, owners and operators would not be able to use the 2004/2005 guidance to close their tank; all closures conducted after the effective date of the proposed rules must be in accordance with the 2013 updated guidance. He also stated that in addition, the proposed amendment stipulates that contaminant concentrations above the DTLs trigger site investigation and, if warranted, corrective action.

- 10 CSR 26-2.078 Investigations for Soil and Groundwater Cleanup.
 - Amend to indicate that discovery of contaminants at concentrations above the DTL triggers investigation to determine full extent of soil and groundwater contamination
 - Amend to allow owners and operators to comply with rule by using the appropriate version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance as a written procedure
 - Keep reference to 2004/2005 RBCA guidance but delete deadline date
 - Amend to incorporate by reference the 2013 updated *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document

Mr. Chibnall noted that 2.078 pertained to investigations of UST system releases. He advised that the rule has been amended to reference the DTLs, to incorporate the 2013 updated guidance, to delete the deadline date for use of the 2004/2005 guidance, and to allow owners and operators to continue to use the 2004/2005 guidance if certain conditions are met.

- 10 CSR 26-2.082 Corrective Action Plan.

- Amend to allow owners and operators to comply with rule by using the appropriate version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a written procedure
- Maintain reference to 2004/2005 RBCA guidance but delete deadline date
- Amend to incorporate by reference the 2013 updated *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document

Mr. Chibnall noted that as with 2.078, the proposed amendments of 2.082 allow owners and operators to continue to use the 2004/2005 guidance if certain conditions are met, deletes the deadline date for use of the 2004/2005 guidance, and incorporates by reference the updated 2013 guidance.

Mr. Chibnall followed this review of the proposed changes with milestones and highlights of the rulemaking schedule. He noted that in March 2013, the Department and PSTIF conducted two webinars to explain to consultants and others the proposed changes to the guidance and the rule amendments. He also testified that the Department had not received any comments on the Regulatory Impact Report. Milestones included:

- 3/3/13: Regulatory Impact Report published
- 3/22/13 and 3/29/13: DNR/PSTIF webinars explain guidance and rule changes
- 4/18/13: Hazardous Waste Management Commission finding of necessity
- 4/19/13: DNR presentation to PSTIF Advisory Committee
- 5/1/13: End of comment period for RIR
- 6/17/13: Rules filed with Secretary of State
- 7/15/13: Rules published in *Missouri Register*, public comment period begins
- 8/15/13: Public hearing

Following this, Mr. Chibnall provided a schedule for future aspects of this rulemaking effort:

- 8/22/13: End of public comment period
- 10/17/13: Final HWMC action
- 1/2/14: Publish order of rulemaking in *Missouri Register*
- 1/29/14: Publish rules in *Code of State Regulations*
- 2/28/14: Rules effective

Mr. Chibnall concluded his testimony with an overview of outreach efforts the Department made to provide information and solicit input regarding the guidance update and rulemaking effort:

- Joint DNR/PSTIF webinars held 3/22/13 and 3/29/13 to explain rulemaking and guidance changes
- Email alert to stakeholders regarding guidance revision and rulemaking
- Comment periods for RIR and rules
- Notice in PSTIF's *Latest Leaks* bulletin
- Information presented at the MO Waste Control Coalition Conference

Following the conclusion of his testimony, Mr. Chibnall inquired as to whether the Commission had any questions regarding the testimony he had given. No questions were asked by the Commission.

Vice-Chairman Sugg addressed the attendees and inquired if there was anyone else wishing to give testimony before the Commission at this hearing. Ms. Carol Eighmey, Executive Director, PSTIF, approached and was sworn in.

Note: Ms. Eighmey's testimony is reflected verbatim to ensure the accuracy of her remarks in this record.

"Good morning. My name is Carol Eighmey; I serve as Executive Director of Missouri's Petroleum Storage Tank Insurance Fund. I appear today on behalf of the 3600 or so participants in the Trust Fund who currently own and operate over 10,000 tank systems where fuel is stored. The majority of our participants are small business owners. They also include cities, counties, schools, hospitals, and the like. And, while the number of leaks occurring from these facilities is tiny, fewer than 20 a year of any substance, a leak event can seriously disrupt their business to the extent that it destroys livelihoods. So, we work hard, along with your staff, to try to prevent that from happening. When it does, however, it's appropriate for those parties to respond with Site Characterization Risk Assessment and Corrective Action as needed to protect human health and the environment, and the rules that are considering today, obviously, address those requirements.

In addition, today I want to make clear I am speaking on behalf of hundreds of other property owners who are not in the fuel business but, for various reasons, are cleaning up properties that were contaminated in years gone by, before current operating rules were in place. A majority of these people are not legally liable for the pollution on their properties. They're voluntarily cleaning up these properties so they can be redeveloped and can contribute to the economic health of their neighborhoods and communities rather than detracting from it. These Missourians, most of them, have no voice in this process. They're not members of a trade association, they have no lobbyists, they include widows, children, grandchildren, purchasers of the properties, bankers, and so forth, and the costs they incur to meet your requirements are borne by all Missourians. So, it is part of our fiduciary duty to represent their interests in this process as well.

So, on behalf of these two groups of citizens, I'm pleased to offer a few comments today. Your current rules require persons who have a leak or who are cleaning up the legacy pollution to comply with requirements that are contained in seven different documents totaling about 400 pages. This is a cumbersome and difficult task.

Today you are considering changes that will streamline your requirements into a single guidance document which we expect will end up being far less than 200 pages. Much of the duplicative, inconsistent, or erroneous language in the seven documents have been eliminated or corrected. This alone -- this streamlining -- makes this rulemaking a worthwhile endeavor.

This is important to lots of people. We are in discussions with your staff now about plans for accelerating the pace of cleanups. More than half of the Trust Fund's open claims -- that is ongoing cleanups -- more than half of those files are 10 years old or older. All of us as practitioners in this business have a responsibility to do everything we can to accelerate those cleanups, get them finished in an appropriate manner so that those properties can, in fact, be returned to economic viability. We think the action that you are considering today is vital in making that happen.

In addition, your proposed rulemaking, as Mr. Chibnall has mentioned, eliminates a requirement to use standardized forms in various reports -- also, a huge improvement in our view. Nine years ago or so, when the consultant helped the Department write the 2004 guidance document, a lot of folks believed that standardizing forms would be a good thing for the process, and there were dozens, I think, of these forms created at the time. As Mr. Chibnall has already told you, what we've painfully discovered is these forms are more often like an appendix in a human being. They may occasionally serve some obscure purpose, but most people function just fine without them. So, the requirement to use these standardized forms is obsolete. Some of the forms, as Tim mentioned, are no longer even accurate. But many of our claimants continue to pay their consultants to fill out these forms and attach them as an unnecessary appendage to their reports; and, then, of course, the Trust Fund has to reimburse those costs. So, we look forward to the elimination of this requirement.

Third, I would note the proposed rule-making does, as Mr. Chibnall has reviewed for you, impose some new requirements, and it importantly changes some of your numerical standards. Tim mentioned several of these particularly related to the new standards that reflect current science, the better and more thorough evaluation of soil characteristics, some more stringent laboratory analysis that's being required, and so forth. We reviewed these proposed changes, and while we're not fans of all of them -- and some of them will increase costs -- we have concluded that they are reasonable and can be implemented without unduly impacting the cost of cleanup. In the last few years, a question has arisen as to how the Department -- excuse me, in the last few months. I misspoke.

In the last few months, a question arose as to how the Department should administer the cleanup requirements at an active operating tank facility when, specifically, if there has been either legacy pollution or recent leak and petroleum impact remains in the ground in areas of the property where the buried storage tank and piping and so forth exist. There's a possibility that persons who work on that equipment can be exposed to soils or ground water that contain petroleum. So, a question proceeds as to how one should properly assess risks for those persons.

Recently, your staff clarified this with a memo which I've attached to my written testimony and will submit today. We're requesting that this memo, this policy memo, also be incorporated into the 2013 guidance document, and we're offering a suggestion as to how you might do that. Since this is a fairly new development and we have an open window of opportunity now

to incorporate this additional policy into the guidance, we think that would be a good thing to do.

In addition, our staff has identified a few minor -- very minor and non-substantive corrections, additional wording corrections, or clarifications similar to the ones Mr. Chibnall reviewed that might be made in the 2013 guidance documents. So, I will not go through those today, but am submitting those in writing as part of my comments.

In closing, I would like to thank DNR Director Sara Parker Pauley, along with Aaron Schmidt and Tim Chibnall of her staff, as well as Dan Henry of my staff for their very detailed and diligent work last winter and spring. They sifted through thousands of words, numbers, charts, and pages to craft these amendments. It's no small accomplishment; and, while it probably falls short of perfect, it is, nevertheless, a significant and substantial step forward, and one that's long overdue.

So, on behalf of our Trust Fund participants and all our claimants, I thank you for the opportunity to testify today, and I urge you to adopt these recommended changes to your requirements. I'll be happy to answer any questions."

No questions were posed by the Commission. Ms. Eighmey provided the Commissioners and Commission staff with a written copy of her remarks and her comments on the proposed rule amendments.

Vice-Chairman Sugg inquired as to whether anyone wished to provide testimony or whether any other written comments had been received. After being advised that no one further had requested to be heard, nor had any further written comments been received, the Public hearing was adjourned at 10:52 a.m.

4. RULEMAKING UPDATE

Mr. Tim Eiken, Director's Office, Hazardous Waste Program, addressed the Commission and advised that the majority of his time recently has been focused on the rule reviews to identify HB1251 requirements. He noted that he had been identifying exclusions to the requirements and going through the current rules and providing this information in meetings with stakeholders. He noted that the Department was closer to completing the process of identifying those rules affected by HB1251, and that a draft final document was almost ready. He noted that when his review was complete, it would be going to Department legal counsel for a further legal review.

Mr. Eiken stated that the next step, following the legal review, would be to provide the Department's findings to the Commission, and upon their approval, the Department would begin the rulemaking process.

Mr. Eiken went on to advise the Commission that the second issue that was being focused on was the packaging, marking and labeling rule language effort. He noted that Department efforts were close to developing draft final rule language, that meetings were being held with smaller groups of stakeholders, and that efforts were close to developing something that all the parties involved could live with.

He then noted that the third item he wished to relay to the Commission was that U.S. Environmental Protection Agency had recently published their final rule on solvent wipes. He provided the Commission with an overview of the rule, that it provided a conditional exclusion for their management as a hazardous waste and that this provided some benefit to generators. He advised the Commission that this would be a topic for discussion at the next Hazardous Waste Forum.

Mr. Eiken then advised the Commission that the issue of trailer parking raised by Exide in the past was nearing resolution, and that efforts were being directed towards a permit modification rather than a rule making. He noted that a representative from Exide was in attendance and would be addressing the Commission during the Public Inquiries portion of the meeting.

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

5. FINANCIAL RESPONSIBILITY QUARTERLY UPDATE

Mr. Mike Martin, Compliance and Enforcement Section, addressed the Commission and provided them with an update of the current financial responsibility enforcement efforts. He noted that on August 21, 2008, the Commission approved an expedited process whereby the HWP director may refer sites that do not have financial responsibility (FR) to the Attorney General's Office (AGO) for enforcement action and civil penalties. The Commission voted for the expedited process to begin on November 1, 2008.

He advised the Commission 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 underground storage tanks, and that the Compliance and Enforcement Section (CES) continues with the tasks and responsibilities of ensuring compliance with FR.

He noted that the expedited program remains successful at prompting compliance. As of August 1, 2013, of the 3,233 regulated active tank sites in Missouri, 2,568 currently have coverage from the Missouri Petroleum Storage Tank Insurance Fund (PSTIF), 578 facilities have acceptable coverage other than PSTIF, 57 are exempt from FR requirements, and only 30 sites have unknown coverage. And, as of the August 1, 2013, report of the sites with unknown FR coverage, ten sites have been sent initial letters, two were recently cited with Notices of Violation by the CES, four are being prepared for referral to the AGO by the CES, and 14 have been referred to the AGO for legal action.

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. RADIOACTIVE MATERIAL TRANSPORTATION UPDATE

Ms. Jane Beetem, Director's Office, Department of Natural Resources, addressed the Commission and provided them with a PowerPoint presentation containing an update on the Department's oversight efforts on transportation of radioactive materials across/through Missouri. She noted that Missouri Revised Statute 260.392 became effective Aug. 28, 2009, and that this statute provides information and requirements related to the shipment of high-level radioactive waste, transuranic radioactive waste, highway route controlled quantity shipments, spent nuclear fuel, or low-level radioactive waste through or within the state, including the collection of fees. She noted that the legislation provided for shipments of radioactive material and waste, except low-level radioactive waste, to pay \$1,800 for each truck, plus a surcharge of \$25 per mile for every mile over 200 miles traveled within the state. This includes all high-level radioactive waste, transuranic waste, spent nuclear fuel or highway route controlled quantity shipments traversing the state or any portion thereof more than 30 miles in length. Rail shipments of high-level radioactive waste, transuranic radioactive waste and spent nuclear fuel pay \$1,300 for the first cask and \$125 for each additional cask for each rail shipment.

Ms. Beetem noted that the Midwest Interstate Low-Level Radioactive Waste Compact Commission is comprised of the states of Indiana, Iowa, Minnesota, Missouri, Ohio, and Wisconsin, and had held their Annual meeting by phone June 25. During this meeting they approved the contract for legal services, the contract for auditor, the financial report and budget, and discussed the waste acceptance practices of the Waste Controlled Specialist facility in west Texas, and funding available for disposal of disused sources of low level radiation. This funding information was provided to hospitals, universities, etc.

She went on to report to the Commission that the Department of Natural Resources coordinates with the Missouri Highway Patrol, the State Emergency Management Agency, the Department of Health and Senior Services (DHSS) and our Environmental Emergency Response (EER) staff. The Department reviews transportation plans prior to large scale shipping campaigns.

The Commission was advised that the Highway Patrol conducts an inspection of the truck on arrival and escorts the shipment through the state. She noted that Highway Patrol escorts have authority to pull shipment into safe parking, if needed. The process also included the DHSS conducting a radiological inspection of the truck upon entry to the state. She noted that the DNR-EER is prepared to respond to emergencies, and works with DHSS to conduct training for first responders. She also advised that SEMA calibrates the radiation detection equipment for agencies and responders.

Ms. Beetem reported that Federal regulation requires radioactive shipments to utilize interstate routes where practical; but, that Missouri may elect to designate an alternative route in a certain area.

She advised that security precautions were in place and that Federal regulation prohibits discussing shipments publicly until several days after arrival at its final destination.

She noted that the Department is represented on the Midwest Radioactive Materials Transportation Project, staffed by the Council of State Governments and funded by the Department of Energy (DOE). She advised that the DOE hosts a national forum, the National Transportation Stakeholders Forum each year. Missouri is part of DOE's Core Group, helping DOE decide how to proceed toward disposal of radioactive waste in a geologic repository.

Ms. Beetem concluded her presentation with advising that educational efforts were ongoing and outlined the training that the Department had developed and provided across the state.

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. QUARTERLY REPORT

Dee Goss, Public Information Officer, Hazardous Waste Program, addressed the Commission and gave brief highlights from the January through March 2013 Quarterly Report. Ms. Goss reviewed a couple of the key articles and highlights provided.

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

8. LEGAL UPDATE

Mr. Tim Blackwell, Acting Commission Counsel, addressed the Commission and advised that he was filling in for Ms. Kara Valentine. He noted that the Commission had gone in to closed session earlier to discuss correspondence they had received from Mr. Ron Carter, which had requested the Commission hear an appeal of a decision made by the Department. Mr. Blackwell advised that it had been determined that the Commission did not have jurisdiction in the matter at this time, as the responsibility to hear appeals had been transferred to the Administrative Hearing Commission (AHC) in 2005. He relayed that the Commission had voted to direct the Department to return the correspondence received, to Mr. Carter, with information as to how he could file this request with the AHC.

Mr. Blackwell then advised the Commission that Ms. Valentine had not provided him with any other information to relay at this meeting, but that she would be present at the October meeting and would report anything pertinent at that time.

Vice Chairman Sugg inquired as to whether the Commission needed to take any further action in regards to Mr. Carter's request, to which Mr. Blackwell advised there was none.

No other 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 OR ISSUES

Mr. David J. Lamb, Director, Hazardous Waste Program, advised the Commission that Mr. Jim Price, representing Exide, had requested to speak before the Commission.

Mr. Price addressed the Commission and advised that the Department and Exide had reached an agreement on an approach to resolve the trailer parking issue. He advised that they had worked out the protocol for a permit modification, which was in draft development. He did note that there was no deadline or timeline established for this at this time.

Mr. Price also advised the Commission that he wished to expound on a second issue, the Exide bankruptcy, which had been discussed by Ms. Valentine at the previous meeting. He explained that the company had been highly leveraged and was going through reorganization. He advised that they intended to continue to operate all their existing facilities and intended to abide by all environmental regulations and keep all financial responsibility mechanisms in place.

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

10. OTHER BUSINESS

Mr. David J. Lamb, Director, Hazardous Waste Program, advised the Commission that he only had a few brief comments. He stated that the Commission had been provided a fairly extensive presentation at the previous meeting regarding the provisions of HB28 and HB650. He advised the Commission that HB28, which contained the hazardous waste and battery fee extensions, had been signed by the Governor, and would extend those fees until December 31, 2018. He advised that this bill also provided for streamlining of the permit process, and staff were beginning to work this into their HB1251 reviews as it would create additional revisions. He also noted that passage of HB28 provided provisions for changes to the Commission structure, adding a representative from the petroleum industry; in addition to allowing the Department and stakeholders to work with the Commission to address fees in the future. Mr. Lamb advised that he was pleased that the bill containing the Program's fees had passed and had been signed into law, and noted that he believed Mr. Eiken had covered everything else earlier in the meeting during his presentation.

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

Information on the next meeting date was provided in the meeting packet. No discussion was made on the issue.

Vice-Chairman Sugg requested a motion to adjourn if no other business needed to be presented to the Commission at this time.

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Commissioner Adams made the motion to adjourn the meeting at 11:28 p.m. The motion was seconded by Commissioner Aull.

Respectfully Submitted,

Debra D. Dobson, Commission Assistant

APPROVED

Michael Foresman, Chairman

Date

AMENDED MINUTES FROM PREVIOUS MEETING

Amendment made to page 4
Agenda Item #4
Election of Officers

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item #3

Adoption of Orders of Rulemaking for Three Amendments

Issue: Adoption of Orders of Rulemaking for three proposed amendments related to the use of risk-based corrective action (RBCA) guidance for underground storage tank (UST) closures, release investigation, and corrective action.

Description: On June 17, 2013, the Department filed three amendments to allow the use of current and updated RBCA guidance, as appropriate, for UST closure and release investigation and corrective action after the current sunset date of Dec. 31, 2012, and to incorporate into rule by reference a version of the RBCA guidance updated in 2013. The Amendments were published in the July 15, 2013, edition of the *Missouri Register*.

The public comment period for this rulemaking opened on July 15, 2013. A Hazardous Waste Management Commission held a public hearing regarding the amendments and the updated guidance on August 15, 2013. The public comment period ended on August 22, 2013.

During the public comment period, the Department received 33 comments from the following: Brian Porter, Terracon; Carol Eighmey, Petroleum Storage Tank Insurance Fund; Mark Jordan, Wallis Companies; Donnie Greenwalt, Wallis Companies; and Ron Leone, Missouri Petroleum Marketers and Convenience Store Association. All of the comments pertained to the updated RBCA guidance document and most were minor clarifications. The Department's responses to the comments are found in the Orders of Rulemaking.

Because the Department proposes to revise the updated RBCA guidance in response to the comments, the date of the guidance document will change to differentiate the revised document from its predecessor; this necessitates a corresponding change in the date of the guidance in the amendments as well.

10 CSR 26-2.062 Assessing the Site at Closure or Change in Service

- Amend to stipulate that the discovery of contaminants at concentrations above the Default Target Levels triggers site investigation and corrective action
- Removes reference to the 2004/2005 *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance and December 31, 2012, deadline date
- Incorporates by reference the 2013 version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a written procedure that may be used to comply with the rule

10 CSR 26-2.078 Investigations for Soil and Groundwater Cleanup

- Amend to stipulate that the discovery of contaminants at concentrations above the Default Target Levels triggers investigation to determine full extent of soil and groundwater contamination
- Amend to allow tank owners and operators to comply with the rule by using the appropriate version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance as a written procedure
- Retain reference to 2004/2005 *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance but delete December 31, 2012, deadline date for use of the guidance
- Amend to incorporate by reference the 2013 updated *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document

10 CSR 26-2.082 Corrective Action Plan

- Amend to allow tank owners and operators to comply with the rule by using the appropriate version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a written procedure
- Retain reference to 2004/2005 *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance but delete December 31, 2012, deadline date for use of the guidance
- Amend to incorporate by reference the 2013 updated *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document

Recommended Action: That the Commission approve the three Orders of Rulemaking to adopt amended rules 10 CSR 26-2.062, 10 CSR 26-2.078, and 10 CSR 26-2.082 published in the July 15, 2013, *Missouri Register* as modified by the Department in response to comments received during the public comment period for the rulemaking.

Suggested Motion Language:

“I move that the Commission adopt/not adopt/or adopt with modifications, the Orders of Rulemaking for amendments 10 CSR 26-2.062, 10 CSR 26-2.078, and 10 CSR 26-2.082 published in the July 15, 2013, *Missouri Register* and that the Department proceed to file the Orders with the Joint Committee on Administrative Rules and the Secretary of State.”

Presented By:

Tim Chibnall – Director’s Office, HWP

**MISSOURI HAZARDOUS WASTE MANAGEMENT COMMISSION
CERTIFICATION OF ADOPTION OF ORDERS OF RULEMAKING
October 17, 2013**

In accordance with Section 260.400.5(3) RSMo, the members of the Hazardous Waste Management Commission certify the adoption of the Orders of Rulemaking to adopt amendments 10 CSR 26-2.062, 10 CSR 26-2.078, and 10 CSR 26-2.082 proposed in the July 15, 2013, edition of the *Missouri Register* (38 MoReg 1160 – 1163).

Michael Foresman, Chairman

Deron Sugg, Vice-Chairman

Charles Adams, Commissioner

Elizabeth Aull, Commissioner

Andrew Bracker, Commissioner

Jamie Frakes, Commissioner

Missouri Department of
Natural Resources

Tanks Risk-Based Corrective Action
Guidance Update and Rulemaking
Presentation of Orders of Rulemaking

Timothy Chibnall, ESIV
Hazardous Waste Program
October 17, 2013



Missouri Department of
Natural Resources

Overview

- Three rules amended:
 - 10 CSR 26-2.062 Assessing the Site at Closure or Change in Service
 - 10 CSR 26-2.078 Investigations for Soil and Groundwater Cleanup
 - 10 CSR 26-2.082 Corrective Action Plan

Missouri Department of
Natural Resources

Overview

- Amendments necessary to allow use of Risk-Based Corrective Action (RBCA) guidance after Dec. 31, 2012
- Incorporate into rule by reference a version of the RBCA guidance updated in 2013

Updated Guidance: Further Changes

- Details of updated guidance provided at 8/15/13 public hearing
- Of 33 comments received during public comment period, DNR did not accept 8 in whole or in part
- The remaining comments resulted in additional changes to the guidance
- All found in Orders of Rulemaking

Comments Not Accepted

- Elimination of 1st paragraph of 5.2
 - DNR proposes to retain some of the language
- Conflict between 5.9.1 and 6.3.3
 - DNR does not agree conflict exists, separate though related subjects
- List Method 3511 in Table 5-1
 - Method is for extraction of COCs, not quantification; only quantification methods in Table 5-1

Comments Not Accepted

- No evaluation of construction worker exposure relative to tank pit and piping
 - DNR agrees not needed for tank pit only
- No vapor intrusion evaluation for tank pit or dispensers
 - DNR agrees not needed for tank pit only

Comments Not Accepted

- Change “LNAPL” to “free product” just above 9.1
 - Use of “LNAPL” appropriate in this case
- Delete first use of “LNAPL” and change second to “free product” in second bullet list in 10.1
 - Use of LNAPL appropriate in both cases
 - Revise 3rd bullet for clarity

Comments Not Accepted

- Change at 6.1.1.2 from “interviews with current property owners” to “information obtained from current property owners by the Consultant or Responsible Party.”
 - DNR does not agree, this would limit DNR’s ability to obtain information from property owners, either in lieu of a consultant or RP or to verify information submitted by them

Changes to Amendments

- Change due to changes to guidance
- Same change to each of the three amendments:
 - Date of *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance changed from January 1, 2013 to October 17, 2013

Schedule

- 10/17/13: Final HWMC action
- 1/2/14: Publish order of rulemaking in *Missouri Register*
- 1/29/14: Publish rules in *Code of State Regulations*
- 2/28/14: Rules effective

Contact Information

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Title 10 – DEPARTMENT OF NATURAL RESOURCES
Division 26 – Petroleum and Hazardous Substance Storage Tanks
Chapter 2 – Underground Storage Tanks – Technical Regulations

ORDER OF RULEMAKING

By the authority vested in the Hazardous Waste Management Commission (Commission) under Sections 319.109 and 319.137, RSMo (Supp. 2010), the Commission hereby adopts an amendment as follows:

10 CSR 26-2.062

A notice of proposed rulemaking containing the text of the amended rule was published in the *Missouri Register* on July 15, 2013 (38 MoReg 1160 – 1163). This amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing was held on August 15, 2013, and the public comment period ended on August 22, 2013. The Missouri Department of Natural Resources' Hazardous Waste Program received thirty-three (33) comments regarding the guidance document proposed for incorporation by reference at section (3)(A) of the amended rule. The comments came from five (5) sources, as follows: Brian Porter, Terracon; Carol Eighmey, Petroleum Storage Tank Insurance Fund; Donnie Greenwalt, Wallis Companies; Mark Jordan, Wallis Companies; and Ron Leone, Missouri Petroleum Marketers and Convenience Store Association. The Hazardous Waste Program did not receive any comments regarding the rule language itself. However, Department staff have determined that changes made to the January 1, 2013, version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a result of comments received during the public comment period necessitate that the date of the guidance be changed in the rule in order to differentiate the final guidance from the January 1, 2013, version. The Department proposes to revise subsection (3)(A) of 10 CSR 26-2.062 to reflect a guidance publication date of October 17, 2013.

COMMENT: Brian Porter stated the following: “One of the main reasons for revising the tanks Missouri Risk-Based Corrective Action (MRBCA) guidance was a desire to update its risk-based levels with the most current toxicological data and scientific methodology utilized by the Environmental Protection Agency (EPA) and other federal and state agencies. The result would be consistent target levels for Missouri’s tanks and Brownfield Voluntary Cleanup Program (B/VCP) that are in line with the most current information used throughout the country.

The proposed updates to the tanks guidance include revisions to the target levels so that they are consistent with the departmental [MRBCA] target levels currently in use. However, we

understand that a forthcoming update to the departmental guidance will further update its target levels. If the updates to the tanks guidance occur as currently scheduled, Missouri's guidance documents will contain consistent target levels for only a very brief period (a matter of months at most). Thereafter, the guidance documents will conflict with each other once again. Acknowledging that the tanks guidance process has been delayed several times already, it seems prudent to delay it one more time so that both it and the departmental guidance can benefit from the latest toxicological and scientific methodology."

RESPONSE: Mr. Porter's understanding regarding the Department's updating of the Departmental Risk-Based Target Levels (RBTLs) is correct; the Department has begun that effort and expects draft updated RBTLs to be developed by the end of 2013. Sometime thereafter, the draft RBTLs will be the subject of a 60-day public comment period. Mr. Porter is also correct in his statement that the Department's updating of the Departmental RBTLs will result in those RBTLs differing from the RBTLs in the Tanks Risk-Based Corrective Action (RBCA) guidance.

The RBTLs in the updated Tanks RBCA guidance are based on methodology and toxicity and other inputs that were current in 2009. While the Department is aware that the methodology and inputs have changed since that time, and despite the Department's preference that the RBTLs in both RBCA documents be the same, the updated Tanks RBCA guidance associated with this rulemaking is the result of protracted negotiations between the Department and Tanks stakeholders during 2012 and early 2013. Those negotiations resulted in all parties agreeing to move ahead with the 2009 RBTLs. As the Department's efforts to revise the Departmental RBTLs have only recently begun, and we cannot ensure that the update will be completed on the anticipated schedule, the Department will move ahead with the 2009 RBTLs (that are consistent with the current Departmental RBTLs) that are found in the Tanks RBCA guidance associated with this rulemaking.

COMMENT: Carol Eighmey stated that much duplicative, inconsistent, or erroneous language in the previous version of the Tanks RBCA guidance has been eliminated or corrected with this update of the guidance, and that this alone makes this rulemaking a worthwhile endeavor.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this rulemaking.

COMMENT: Ms. Eighmey pointed out that the Department's proposed rulemaking eliminates the requirement to use standardized forms in various reports, and that this is "a huge improvement." She stated that the requirement to use these standardized forms is now clearly obsolete and that some of the forms are no longer even accurate. Ms. Eighmey indicated that the PSTIF looks forward to the elimination of this requirement.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this change.

COMMENT: Ms. Eighmey stated "the proposed rulemaking *does* impose some new requirements and changes some of the numerical cleanup standards. We have reviewed the proposed changes and – while we're not fans of all of them, and some of them will increase costs – we nevertheless believe they are reasonable and can be implemented without *unduly* increasing costs."

RESPONSE: The Department appreciates Ms. Eighmey's understanding and support of the new requirements.

COMMENT: Ms. Eighmey stated that what has been accomplished with this rulemaking and guidance update – "while it undoubtedly falls short of perfect – is a *significant and substantial* step forward, and one that is long overdue."

RESPONSE: The Department agrees with Ms. Eighmey's comment and appreciates her support of the rulemaking.

COMMENT: Ms. Eighmey stated that the first paragraph in Subsection 1.1 of the updated Tanks RBCA guidance accurately refers to the 2004 RBCA guidance document as "draft guidance." She suggests that the first sentence in the second paragraph of the subsection be revised as follows: "In 2005, the process provided for by the **draft** guidance was modified..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of Subsection 1.1 has been changed to read: "In 2005, the process provided for by the draft guidance was modified by the addition of six supplemental guidance documents."

COMMENT: Ms. Eighmey stated that the second sentence in Subsection 2.1 of the updated guidance refers to Section 1.3 of the Guidance Document, which will no longer exist. She suggests deleting the phrase, "...as discussed at Section 1.3 of this document..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 2.1 has been revised to read: "The MRBCA process begins when a petroleum release is suspected or discovered and includes all subsequent activities (except those conducted under 260.500 through 260.550 RSMo and the regulations promulgated thereunder) until MDNR issues a 'No Further Action' (NFA) letter for the release."

COMMENT: Ms. Eighmey suggests renaming Subsection 2.2.1 of the updated guidance “**Release** Discovery” instead of “Site Discovery,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. Subsection 2.2.1 of the updated guidance has been renamed “Release Discovery.”

In addition, the Department has changed the first sentence of Subsection 2.2.1 of the updated guidance to refer to the discovery of a release at an underground storage tank (UST)/above ground storage tank (AST) site rather than the discovery of “contamination.” In addition, “site” also appeared in the second and third sentences of Subsection 2.2.1 as well as the first sentence of the second paragraph of the subsection. Where appropriate, the Department has changed the use of “site” in the subsection to “release,” as follows:

“The MRBCA process begins with the discovery of a release at a UST/AST site. A release might be discovered and reported to the MDNR under a variety of circumstances including, but not limited to, (i) system closure, (ii) a site check investigation resulting in confirmation of a release, and (iii) identification of an imminent hazard (e.g., vapors in sewers or buildings, etc.). Releases might also be identified during investigations conducted as a part of real estate transactions, investigations conducted in anticipation of land development, and the occurrence of accidents and spills.

The release discovery process should generally result in the identification of affected media at a site and generate analytical data. This initial data should, ideally, represent the point or points of release, the chemicals of concern (COCs), and the maximum concentrations of the COCs.”

COMMENT: Ms. Eighmey suggests revising the fourth sentence of Subsection 2.4 of the updated guidance as follows, “Such communication must occur throughout the MRBCA process, from **release** discovery to issuance...,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. The fourth sentence of Subsection 2.4 has been revised to read: “Such communication must occur throughout the MRBCA process, from release discovery to issuance of a NFA letter, so that interested parties can determine if decisions made and activities undertaken during the MRBCA process at a site were sufficient to adequately protect human health and the environment.”

COMMENT: Ms. Eighmey suggests revising the first sentence of the second paragraph of Subsection 3.1 of the updated guidance as follows: “...may ultimately lead to ~~site~~ discovery **of a release**.”

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of the second paragraph of Subsection 3.1 has been revised to read: "A number of different events may trigger site-specific activities that may ultimately lead to release discovery."

COMMENT: Ms. Eighmey stated that, since an explicit list of required photographs is being added to the guidance, the previous, less-precise sentence toward the end of Subsection 4.4.1 that says, "During the tank closure process, sufficient color photographs shall be collected to document the condition of tanks, excavation, pads, etc. and submitted with the closure report" should be deleted.

RESPONSE: The Department accepts the comment. The second-to-last sentence in Subsection 4.4.1 has been deleted from the updated guidance.

COMMENT: Ms. Eighmey suggests revising Subsection 4.5.8 of the updated guidance to more accurately describe current practices, as follows: "If treatment will be via on-site landfarming, **approval must be obtained from MDNR's Tanks Section as part of the Corrective Action Plan (CAP) for the petroleum release. Off-site landfarms require a permit issued by MDNR's Water Protection Program (WPP);** for information ~~concerning landfarm permits,~~ contact MDNR's WPP at ..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 4.5.8 has been revised to read: "If treatment will be via on-site landfarming, approval must be obtained from MDNR's Tanks Section as part of the CAP for the petroleum release. Off-site landfarms require a permit issued by MDNR's WPP; for information, contact MDNR's WPP at (573) 751-1300."

COMMENT: Ms. Eighmey suggests revising the last item in the third bulleted list of Subsection 5.1 to be consistent with change to terminology made throughout the document, as follows: "Information about corrective action measures ~~or risk management activities~~ that have been conducted and are planned."

RESPONSE: The Department accepts Ms. Eighmey's comment. The last item in third bulleted list has been revised to read: "Information about corrective action measures that have been conducted and are planned."

COMMENT: Also in Subsection 5.1, Ms. Eighmey suggests revising the first sentence of the paragraph following the third bulleted list as follows: "...beyond that discussed herein might be required to develop a **Corrective Action Plan** or to complete a Tier3..."

RESPONSE: The Department accepts Ms. Eighmey’s comment. The first sentence in the paragraph following the third bulleted list in Subsection 5.1 has been revised to read: “Note: Additional data beyond that discussed herein might be required to develop a Corrective Action Plan (CAP) or to complete a Tier 3 risk assessment.”

COMMENT: Ms. Eighmey states that the first paragraph of Subsection 5.2 of the updated guidance appears to have been written in 2004 to help owners and their consultants understand how to transition to the new MRBCA Guidance. She indicates that the paragraph is largely obsolete today and – as a summary of the RBCA process – discusses in a general way the tasks that are more specifically presented throughout the document. Ms. Eighmey suggests deleting the entire paragraph.

RESPONSE: The Department accepts Ms. Eighmey’s comment in part. The Department believes some of the language in the first paragraph of Subsection 5.2 is valuable and therefore should be retained. The paragraph has been revised to read as follows: “As part of the MRBCA evaluation, the person undertaking the evaluation must carefully review all existing data and identify any data gaps. Only after all the necessary data have been collected and full site characterization is complete should the person undertaking the evaluation proceed with the development of target levels.”

COMMENT: Ms. Eighmey points out that the second paragraph of Subsection 5.4.5 of the updated guidance references MEGA, a compilation of data that is now obsolete. She suggests revising the paragraph as follows: “Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and “CARES” maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>.”

RESPONSE: The Department accepts Ms. Eighmey’s comment. The second paragraph of Subsection 5.4.5 has been revised to read: “Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and Center for Applied Research and Environmental Systems or “CARES” maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>.”

COMMENT: Ms. Eighmey states that the last paragraph of the text added to Subsection 5.6.4 as part of the guidance update advises the reader to “refer to Subsection 5.8 for developing a sampling plan for VWC.” She indicates that, though Subsection 5.8 contains helpful information for designing one’s sampling plan, it is not specific to volumetric water content (VWC). Ms. Eighmey suggests deleting the words “for VWC” from the text in Subsection 5.6.4.

RESPONSE: The Department accepts Ms. Eighmey's comment. The last paragraph of Subsection 5.6.4 has been revised to read: "Refer to Subsection 5.8 for developing a sampling plan. Because VWC varies over time most significantly in surficial soil, VWC data should not be collected from surficial soil (i.e., 0 – 3') except when the foundation of an existing building is less than 3' deep."

COMMENT: Ms. Eighmey states that Subsection 5.9.1 conflicts with information contained in Subsection 6.3.3 regarding point of demonstration (POD) and point of exposure (POE). She suggests that the subsection be revised accordingly.

RESPONSE: The Department does not agree that the two subsections are in conflict, because Subsection 5.9.1 pertains to delineation of contaminants in groundwater whereas Subsection 6.3.3 pertains to the evaluation of the groundwater use pathway. Even so, the Department has added the following sentence to the end of the last paragraph of Subsection 6.3.3 for clarity: "In every case of groundwater contamination and notwithstanding the foregoing, contaminants in groundwater shall be delineated in accordance with Subsection 5.9.1 of this guidance."

COMMENT: Ms. Eighmey comments that the Department accepts Method 3511 for total petroleum hydrocarbons-diesel range organics (TPH-DRO), as long as the lab meets the same detection limits and quality assurance/quality control (QA/QC) requirements as for other methods. She suggests that Method 3511 be added to Table 5-1 as an option for TPH-DRO.

RESPONSE: The Department does not accept Ms. Eighmey's comment. Method 3511 is a micro-extraction procedure; it is not an analysis procedure to quantify concentrations of COCs. The information in Table 5-1 includes analysis procedures. While the Tanks Section has approved the use of Method 3511, the guidance is not structured to include such extraction methods, but rather only analytical methods. Therefore, the Department has not made the suggested addition.

COMMENT: Ms. Eighmey suggests that the following sentence be inserted into the updated guidance at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate dermal contact risk associated with soil or groundwater exposures in the areas of the property where tanks/piping are located."

RESPONSE: The Department agrees with the essence of Ms. Eighmey's comment, but not all of the suggested language. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. In that memorandum,

the scope of the exception described in the memo and Ms. Eighmey's comment is limited to the tank pit as defined in the memorandum. The Department intends for the language to be added at the end of Subsection 6.1.2.1 to reflect the scope defined in the memorandum. Therefore, in response to this comment, the Department has inserted the following language at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate the soil ingestion, inhalation, and dermal contact exposure pathway nor the dermal contact with groundwater exposure pathway for the construction worker receptor in the area in which an active underground storage tank (i.e., the tank pit) is located."

COMMENT: Ms. Eighmey suggests inserting the following sentence at the end of Subsection 6.1.3.1: "At an active tank facility, the exposure model can assume no building will be constructed over the tank pit or where the dispensers are located."

RESPONSE: The Department accepts Ms. Eighmey's comment in part. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. With respect to the exposure model limitation, the memorandum states "When evaluating the indoor inhalation of vapors exposure pathways for soil and groundwater for a future residential or non-residential land use scenario, the tank pit need not be included in the evaluation. All areas outside of the tank pit shall be included in the evaluation." The Department has not incorporated Ms. Eighmey's suggested language "where the dispensers are located" into the subsection because the memorandum applies only to the tank pit. The Department intends for the language added at the end of Subsection 6.1.3.1 to be consistent with Mr. Schmidt's memorandum. Therefore, the Department has added the following language to the end of Subsection 6.1.3.1: "The exposure model for an active tank facility may assume that no building will be constructed over the tank pit."

COMMENT: So that the text will match the terminology used in Table 7-4, Ms. Eighmey suggests that the third paragraph of Subsection 7.5 of the updated guidance be revised as follows: "Depending on this distance and the **depth** to groundwater..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of the third paragraph of Subsection 7.5 has been revised to read: "Depending on this distance and the depth to groundwater, as discussed above, soil concentrations protective of groundwater will be selected from Tables 7-4(a), 7-4(b), or 7-4(c)."

COMMENT: Ms. Eighmey states that the text added (during updating of the guidance) just before Subsection 9.1 references "light non-aqueous phase liquid" and "LNAPL" in several

places. She asks whether this paragraph should use the term “free product” instead of “light non-aqueous phase liquid” or “LNAPL.”

RESPONSE: The Department feels the use of “LNAPL” rather than “free product” is appropriate in the paragraphs just before Subsection 9.1 because the analytical limitations that necessitate the requirements stated in the paragraphs pertain equally to both mobile (i.e., “free product”) and immobile LNAPL. In the experience of the Department, analytical laboratories frequently refrain from analyzing grossly contaminated samples (i.e., samples with mobile and/or immobile LNAPL) because such samples can result in equipment being out of use for extended periods due to the need to thoroughly clean the equipment and due to the difficulty in accurately quantifying all chemicals of concern in such samples. The latter is due to the need to dilute such samples such that the detection limits for some of the COCs are elevated to a degree that the concentrations of the chemicals cannot be meaningfully quantified. Therefore, the Department has not made any change to the paragraphs immediately preceding Subsection 9.1.

COMMENT: Ms. Eighmey states that the second bulleted list in Subsection 10.1 contains two references to “LNAPL” in two places. She suggests deleting the first reference and changing the second to “free product.”

RESPONSE: The Department does not agree with Ms. Eighmey’s suggestions. The sentence preceding the second bulleted list in Subsection 10.1 reads: “The overall objective of a [Corrective Action Plan] is to ensure that:” The third bullet thereafter correctly explains the conditions related to LNAPL and free product that the Corrective Action Plan is to address or prevent. However, upon review, the Department finds the language in the third bullet of the second bulleted list in Subsection 10.1 is unclear with regard to whether the conditions stated there pertain to LNAPL, free product, or both.

To ensure the requirements of Subsection 10.1 are clear, the Department has revised the language of the third bullet in the second bulleted list in the subsection to read as follows: “Mobile or immobile light non-aqueous phase liquids (LNAPL; mobile LNAPL is referred to as “free product”) are not present in the soil or groundwater in volumes that will result in any of the following conditions: (i) an expanding free product plume in soil or groundwater, (ii) an expanding dissolved plume, (iii) unacceptable risk to human health or the environment, and (iv) explosive or fire hazard.”

These changes are based on the Department’s contention that an expanding dissolved phase contaminant plume and unacceptable risk to human health or the environment could be caused by either LNAPL or free product. We contend that the same is arguably true with respect to the creation of an explosion or fire hazard as well. However, we acknowledge that only free product is subject to migration and therefore have replaced “LNAPL” at (i) with “free product.”

COMMENT: Ms. Eighmey comments that the numbering of the footnotes in Appendix C of the updated guidance may need to be corrected.

RESPONSE: The Department thanks Ms. Eighmey for the comment and has ensured that the numbering of the footnotes is correct.

COMMENT: Mr. Greenwalt stated that, overall, he has no major concerns with what the new rules or Tanks RBCA guidance document contain and that he believes the Department, the Petroleum Storage Tank Insurance Fund, and the Missouri Petroleum Marketers and Convenience Store Association put forth a great effort to collaborate and compromise on a streamlined document that will hopefully make the RBCA process less cumbersome and help facilitate site closures. Mr. Greenwalt further stated that, while this latest version of the RBCA guidance might not be perfect, it is clearly an improvement over the previous version of the guidance based on the consolidation and elimination of redundancy and useless requirements.

RESPONSE: The Department appreciates Mr. Greenwalt's support of this rulemaking effort.

COMMENT: Mr. Greenwalt stated that he has a few comments on the requirements contained in Subsection 6.1.1.2 (Determination of Reasonably Anticipated Future Land Use (RAFU)) of the updated RBCA guidance and, more importantly, the administration of this particular section by the Department's project managers. He goes on to say that he is not strongly opposed to the addition of "interviews with property owners" to the list of factors in Subsection 6.1.1.2 that may be used to determine the RAFU of a property, but rather that he disagrees with the disproportionate amount of weight given to this factor by the Department's project managers.

RESPONSE: Most of the comments submitted by Mr. Greenwalt pertain to how the Department implements those parts of the guidance pertaining to RAFU decisions – in particular how information from property owners is gathered and managed – rather than to the language of the amended rules or the updated guidance themselves. Rulemaking public comment periods, including the comment period for this rulemaking, provide the public with an opportunity to submit comments in support, comments in opposition or comments suggesting edits to the specific proposed rules and any material to be incorporated by reference. Mr. Greenwalt's comments pertaining to the Department's implementation of the guidance to be incorporated by reference are therefore outside of the scope of the rulemaking and the Department has not responded to those in this Order of Rulemaking. In addition, in his comments, Mr. Greenwalt does not suggest any changes to the rules or the updated guidance document.

COMMENT: Mr. Greenwalt states that, although the updated Tanks RBCA guidance document has not been accepted by the Hazardous Waste Commission, some of the Department's project

managers have, for some time, been requiring (not simply requesting) that information regarding future property use be obtained from current property owners.

RESPONSE: The statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Jordan commended the Department for its efforts to develop a broad consensus on complex and difficult topics.

RESPONSE: The Department thanks Mr. Jordan for his comment.

COMMENT: Mr. Jordan stated that his sole comment pertains to Subsection 6.1.1.2 of the updated Tanks RBCA guidance. He suggested that “interviews with current property owners” be deleted from the subsection and replaced by “information obtained from current property owners by the Consultant or the Responsible Party.”

RESPONSE: The Department does not agree with Mr. Jordan’s suggestion because the suggested language would limit the Department’s ability to obtain information from current property owners. The Department believes it is both reasonable and appropriate for its project managers to gather information from property owners, whether in lieu of a consultant or responsible party or in order to verify information submitted by a consultant or responsible party. The Department’s role of overseeing RBCA evaluations includes verifying information submitted by consultants by contacting or finding other, additional sources of information.

In addition, the statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Leone stated that the Missouri Petroleum Marketers & Convenience Store Association (MPCA) “fully supports and incorporates herein by reference both the written comments being submitted by Mark Jordan & Donnie Greenwalt with Wallis Companies and the 8/15/13 public testimony presented by the Petroleum Storage Tank Insurance Fund (PSTIF).”

RESPONSE: The Department's responses to the comments submitted by Mr. Greenwalt, Mr. Jordan, and Ms. Eighmey are contained within this Order of Rulemaking.

COMMENT: Mr. Leone stated that "MPCA believes the proposed RBCA rule changes are for the most part necessary, reasonable [and] measured, and we ask that you seriously consider the comments and suggestions provided by both PSTIF and Wallis Companies."

RESPONSE: The Department thanks Mr. Leone for the comment. The Department has given serious consideration to all of the comments submitted and has provided a response to each in this Order of Rulemaking.

COMMENT: Mr. Leone thanked Department staff for their hard work to develop the amendments and update the Tanks RBCA guidance.

RESPONSE: The Department thanks Mr. Leone for his comments recognizing the work of Department staff in relation to this rulemaking.

10 CSR 26-2.062 Assessing the Site at Closure or Change in Service

(3) Owners and operators shall follow a written procedure.

(A) To comply with this rule, owners and operators may use the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document, October 17, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

Title 10 – DEPARTMENT OF NATURAL RESOURCES
Division 26 – Petroleum and Hazardous Substance Storage Tanks
Chapter 2 – Underground Storage Tanks – Technical Regulations

ORDER OF RULEMAKING

By the authority vested in the Hazardous Waste Management Commission (Commission) under Sections 319.109 and 319.137, RSMo (Supp. 2010), the Commission hereby adopts an amendment as follows:

10 CSR 26-2.078

A notice of proposed rulemaking containing the text of the amended rule was published in the *Missouri Register* on July 15, 2013 (38 MoReg 1160 – 1163). This amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing was held on August 15, 2013, and the public comment period ended on August 22, 2013. The Missouri Department of Natural Resources' Hazardous Waste Program received thirty-three (33) comments regarding the guidance document proposed for incorporation by reference at section (3)(C)1 of the amended rule. The comments came from five (5) sources, as follows: Brian Porter, Terracon; Carol Eighmey, Petroleum Storage Tank Insurance Fund; Donnie Greenwalt, Wallis Companies; Mark Jordan, Wallis Companies; and Ron Leone, Missouri Petroleum Marketers and Convenience Store Association. The Hazardous Waste Program did not receive any comments regarding the rule language itself. However, Department staff have determined that changes made to the January 1, 2013, version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a result of comments received during the public comment period necessitate that the date of the guidance be changed in the rule in order to differentiate the final guidance from the January 1, 2013, version. The Department proposes to revise subsection (3)(C) 1 of 10 CSR 26-2.078 to reflect a guidance publication date of October 17, 2013.

COMMENT: Brian Porter stated the following: “One of the main reasons for revising the tanks Missouri Risk-Based Corrective Action (MRBCA) guidance was a desire to update its risk-based levels with the most current toxicological data and scientific methodology utilized by the Environmental Protection Agency (EPA) and other federal and state agencies. The result would be consistent target levels for Missouri’s tanks and Brownfield Voluntary Cleanup Program (B/VCP) that are in line with the most current information used throughout the country.

The proposed updates to the tanks guidance include revisions to the target levels so that they are consistent with the departmental [MRBCA] target levels currently in use. However, we

understand that a forthcoming update to the departmental guidance will further update its target levels. If the updates to the tanks guidance occur as currently scheduled, Missouri's guidance documents will contain consistent target levels for only a very brief period (a matter of months at most). Thereafter, the guidance documents will conflict with each other once again. Acknowledging that the tanks guidance process has been delayed several times already, it seems prudent to delay it one more time so that both it and the departmental guidance can benefit from the latest toxicological and scientific methodology.”

RESPONSE: Mr. Porter's understanding regarding the Department's updating of the Departmental Risk-Based Target Levels (RBTLs) is correct; the Department has begun that effort and expects draft updated RBTLs to be developed by the end of 2013. Sometime thereafter, the draft RBTLs will be the subject of a 60-day public comment period. Mr. Porter is also correct in his statement that the Department's updating of the Departmental RBTLs will result in those RBTLs differing from the RBTLs in the Tanks Risk-Based Corrective Action (RBCA) guidance.

The RBTLs in the updated Tanks RBCA guidance are based on methodology and toxicity and other inputs that were current in 2009. While the Department is aware that the methodology and inputs have changed since that time, and despite the Department's preference that the RBTLs in both RBCA documents be the same, the updated Tanks RBCA guidance associated with this rulemaking is the result of protracted negotiations between the Department and Tanks stakeholders during 2012 and early 2013. Those negotiations resulted in all parties agreeing to move ahead with the 2009 RBTLs. As the Department's efforts to revise the Departmental RBTLs have only recently begun, and we cannot ensure that the update will be completed on the anticipated schedule, the Department will move ahead with the 2009 RBTLs (that are consistent with the current Departmental RBTLs) that are found in the Tanks RBCA guidance associated with this rulemaking.

COMMENT: Carol Eighmey stated that much duplicative, inconsistent, or erroneous language in the previous version of the Tanks RBCA guidance has been eliminated or corrected with this update of the guidance, and that this alone makes this rulemaking a worthwhile endeavor.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this rulemaking.

COMMENT: Ms. Eighmey pointed out that the Department's proposed rulemaking eliminates the requirement to use standardized forms in various reports, and that this is “a huge improvement.” She stated that the requirement to use these standardized forms is now clearly obsolete and that some of the forms are no longer even accurate. Ms. Eighmey indicated that the PSTIF looks forward to the elimination of this requirement.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this change.

COMMENT: Ms. Eighmey stated "the proposed rulemaking *does* impose some new requirements and changes some of the numerical cleanup standards. We have reviewed the proposed changes and – while we're not fans of all of them, and some of them will increase costs – we nevertheless believe they are reasonable and can be implemented without *unduly* increasing costs."

RESPONSE: The Department appreciates Ms. Eighmey's understanding and support of the new requirements.

COMMENT: Ms. Eighmey stated that what has been accomplished with this rulemaking and guidance update – "while it undoubtedly falls short of perfect – is a *significant and substantial* step forward, and one that is long overdue."

RESPONSE: The Department agrees with Ms. Eighmey's comment and appreciates her support of the rulemaking.

COMMENT: Ms. Eighmey stated that the first paragraph in Subsection 1.1 of the updated Tanks RBCA guidance accurately refers to the 2004 RBCA guidance document as "draft guidance." She suggests that the first sentence in the second paragraph of the subsection be revised as follows: "In 2005, the process provided for by the **draft** guidance was modified..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of Subsection 1.1 has been changed to read: "In 2005, the process provided for by the draft guidance was modified by the addition of six supplemental guidance documents."

COMMENT: Ms. Eighmey stated that the second sentence in Subsection 2.1 of the updated guidance refers to Section 1.3 of the Guidance Document, which will no longer exist. She suggests deleting the phrase, "...as discussed at Section 1.3 of this document..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 2.1 has been revised to read: "The MRBCA process begins when a petroleum release is suspected or discovered and includes all subsequent activities (except those conducted under 260.500 through 260.550 RSMo and the regulations promulgated thereunder) until MDNR issues a 'No Further Action' (NFA) letter for the release."

COMMENT: Ms. Eighmey suggests renaming Subsection 2.2.1 of the updated guidance “**Release** Discovery” instead of “Site Discovery,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. Subsection 2.2.1 of the updated guidance has been renamed “Release Discovery.”

In addition, the Department has changed the first sentence of Subsection 2.2.1 of the updated guidance to refer to the discovery of a release at an underground storage tank (UST)/above ground storage tank (AST) site rather than the discovery of “contamination.” In addition, “site” also appeared in the second and third sentences of Subsection 2.2.1 as well as the first sentence of the second paragraph of the subsection. Where appropriate, the Department has changed the use of “site” in the subsection to “release,” as follows:

“The MRBCA process begins with the discovery of a release at a UST/AST site. A release might be discovered and reported to the MDNR under a variety of circumstances including, but not limited to, (i) system closure, (ii) a site check investigation resulting in confirmation of a release, and (iii) identification of an imminent hazard (e.g., vapors in sewers or buildings, etc.). Releases might also be identified during investigations conducted as a part of real estate transactions, investigations conducted in anticipation of land development, and the occurrence of accidents and spills.

The release discovery process should generally result in the identification of affected media at a site and generate analytical data. This initial data should, ideally, represent the point or points of release, the chemicals of concern (COCs), and the maximum concentrations of the COCs.”

COMMENT: Ms. Eighmey suggests revising the fourth sentence of Subsection 2.4 of the updated guidance as follows, “Such communication must occur throughout the MRBCA process, from **release** discovery to issuance...,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. The fourth sentence of Subsection 2.4 has been revised to read: “Such communication must occur throughout the MRBCA process, from release discovery to issuance of a NFA letter, so that interested parties can determine if decisions made and activities undertaken during the MRBCA process at a site were sufficient to adequately protect human health and the environment.”

COMMENT: Ms. Eighmey suggests revising the first sentence of the second paragraph of Subsection 3.1 of the updated guidance as follows: “...may ultimately lead to ~~site~~ discovery **of a release**.”

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of the second paragraph of Subsection 3.1 has been revised to read: "A number of different events may trigger site-specific activities that may ultimately lead to release discovery."

COMMENT: Ms. Eighmey stated that, since an explicit list of required photographs is being added to the guidance, the previous, less-precise sentence toward the end of Subsection 4.4.1 that says, "During the tank closure process, sufficient color photographs shall be collected to document the condition of tanks, excavation, pads, etc. and submitted with the closure report" should be deleted.

RESPONSE: The Department accepts the comment. The second-to-last sentence in Subsection 4.4.1 has been deleted from the updated guidance.

COMMENT: Ms. Eighmey suggests revising Subsection 4.5.8 of the updated guidance to more accurately describe current practices, as follows: "If treatment will be via on-site landfarming, **approval must be obtained from MDNR's Tanks Section as part of the Corrective Action Plan (CAP) for the petroleum release. Off-site landfarms require a permit issued by MDNR's Water Protection Program (WPP);** for information ~~concerning landfarm permits,~~ contact MDNR's WPP at ..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 4.5.8 has been revised to read: "If treatment will be via on-site landfarming, approval must be obtained from MDNR's Tanks Section as part of the CAP for the petroleum release. Off-site landfarms require a permit issued by MDNR's WPP; for information, contact MDNR's WPP at (573) 751-1300."

COMMENT: Ms. Eighmey suggests revising the last item in the third bulleted list of Subsection 5.1 to be consistent with change to terminology made throughout the document, as follows: "Information about corrective action measures ~~or risk management activities~~ that have been conducted and are planned."

RESPONSE: The Department accepts Ms. Eighmey's comment. The last item in third bulleted list has been revised to read: "Information about corrective action measures that have been conducted and are planned."

COMMENT: Also in Subsection 5.1, Ms. Eighmey suggests revising the first sentence of the paragraph following the third bulleted list as follows: "...beyond that discussed herein might be required to develop a **Corrective Action Plan** or to complete a Tier3..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence in the paragraph following the third bulleted list in Subsection 5.1 has been revised to read: "Note: Additional data beyond that discussed herein might be required to develop a Corrective Action Plan (CAP) or to complete a Tier 3 risk assessment."

COMMENT: Ms. Eighmey states that the first paragraph of Subsection 5.2 of the updated guidance appears to have been written in 2004 to help owners and their consultants understand how to transition to the new MRBCA Guidance. She indicates that the paragraph is largely obsolete today and – as a summary of the RBCA process – discusses in a general way the tasks that are more specifically presented throughout the document. Ms. Eighmey suggests deleting the entire paragraph.

RESPONSE: The Department accepts Ms. Eighmey's comment in part. The Department believes some of the language in the first paragraph of Subsection 5.2 is valuable and therefore should be retained. The paragraph has been revised to read as follows: "As part of the MRBCA evaluation, the person undertaking the evaluation must carefully review all existing data and identify any data gaps. Only after all the necessary data have been collected and full site characterization is complete should the person undertaking the evaluation proceed with the development of target levels."

COMMENT: Ms. Eighmey points out that the second paragraph of Subsection 5.4.5 of the updated guidance references MEGA, a compilation of data that is now obsolete. She suggests revising the paragraph as follows: "Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and "CARES" maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second paragraph of Subsection 5.4.5 has been revised to read: "Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and Center for Applied Research and Environmental Systems or "CARES" maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>."

COMMENT: Ms. Eighmey states that the last paragraph of the text added to Subsection 5.6.4 as part of the guidance update advises the reader to "refer to Subsection 5.8 for developing a sampling plan for VWC." She indicates that, though Subsection 5.8 contains helpful information for designing one's sampling plan, it is not specific to volumetric water content (VWC). Ms. Eighmey suggests deleting the words "for VWC" from the text in Subsection 5.6.4.

RESPONSE: The Department accepts Ms. Eighmey's comment. The last paragraph of Subsection 5.6.4 has been revised to read: "Refer to Subsection 5.8 for developing a sampling plan. Because VWC varies over time most significantly in surficial soil, VWC data should not be collected from surficial soil (i.e., 0 – 3') except when the foundation of an existing building is less than 3' deep."

COMMENT: Ms. Eighmey states that Subsection 5.9.1 conflicts with information contained in Subsection 6.3.3 regarding point of demonstration (POD) and point of exposure (POE). She suggests that the subsection be revised accordingly.

RESPONSE: The Department does not agree that the two subsections are in conflict, because Subsection 5.9.1 pertains to delineation of contaminants in groundwater whereas Subsection 6.3.3 pertains to the evaluation of the groundwater use pathway. Even so, the Department has added the following sentence to the end of the last paragraph of Subsection 6.3.3 for clarity: "In every case of groundwater contamination and notwithstanding the foregoing, contaminants in groundwater shall be delineated in accordance with Subsection 5.9.1 of this guidance."

COMMENT: Ms. Eighmey comments that the Department accepts Method 3511 for total petroleum hydrocarbons-diesel range organics (TPH-DRO), as long as the lab meets the same detection limits and quality assurance/quality control (QA/QC) requirements as for other methods. She suggests that Method 3511 be added to Table 5-1 as an option for TPH-DRO.

RESPONSE: The Department does not accept Ms. Eighmey's comment. Method 3511 is a micro-extraction procedure; it is not an analysis procedure to quantify concentrations of COCs. The information in Table 5-1 includes analysis procedures. While the Tanks Section has approved the use of Method 3511, the guidance is not structured to include such extraction methods, but rather only analytical methods. Therefore, the Department has not made the suggested addition.

COMMENT: Ms. Eighmey suggests that the following sentence be inserted into the updated guidance at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate dermal contact risk associated with soil or groundwater exposures in the areas of the property where tanks/piping are located."

RESPONSE: The Department agrees with the essence of Ms. Eighmey's comment, but not all of the suggested language. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. In that memorandum,

the scope of the exception described in the memo and Ms. Eighmey's comment is limited to the tank pit as defined in the memorandum. The Department intends for the language to be added at the end of Subsection 6.1.2.1 to reflect the scope defined in the memorandum. Therefore, in response to this comment, the Department has inserted the following language at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate the soil ingestion, inhalation, and dermal contact exposure pathway nor the dermal contact with groundwater exposure pathway for the construction worker receptor in the area in which an active underground storage tank (i.e., the tank pit) is located."

COMMENT: Ms. Eighmey suggests inserting the following sentence at the end of Subsection 6.1.3.1: "At an active tank facility, the exposure model can assume no building will be constructed over the tank pit or where the dispensers are located."

RESPONSE: The Department accepts Ms. Eighmey's comment in part. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. With respect to the exposure model limitation, the memorandum states "When evaluating the indoor inhalation of vapors exposure pathways for soil and groundwater for a future residential or non-residential land use scenario, the tank pit need not be included in the evaluation. All areas outside of the tank pit shall be included in the evaluation." The Department has not incorporated Ms. Eighmey's suggested language "where the dispensers are located" into the subsection because the memorandum applies only to the tank pit. The Department intends for the language added at the end of Subsection 6.1.3.1 to be consistent with Mr. Schmidt's memorandum. Therefore, the Department has added the following language to the end of Subsection 6.1.3.1: "The exposure model for an active tank facility may assume that no building will be constructed over the tank pit."

COMMENT: So that the text will match the terminology used in Table 7-4, Ms. Eighmey suggests that the third paragraph of Subsection 7.5 of the updated guidance be revised as follows: "Depending on this distance and the **depth** to groundwater..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of the third paragraph of Subsection 7.5 has been revised to read: "Depending on this distance and the depth to groundwater, as discussed above, soil concentrations protective of groundwater will be selected from Tables 7-4(a), 7-4(b), or 7-4(c)."

COMMENT: Ms. Eighmey states that the text added (during updating of the guidance) just before Subsection 9.1 references "light non-aqueous phase liquid" and "LNAPL" in several

places. She asks whether this paragraph should use the term “free product” instead of “light non-aqueous phase liquid” or “LNAPL.”

RESPONSE: The Department feels the use of “LNAPL” rather than “free product” is appropriate in the paragraphs just before Subsection 9.1 because the analytical limitations that necessitate the requirements stated in the paragraphs pertain equally to both mobile (i.e., “free product”) and immobile LNAPL. In the experience of the Department, analytical laboratories frequently refrain from analyzing grossly contaminated samples (i.e., samples with mobile and/or immobile LNAPL) because such samples can result in equipment being out of use for extended periods due to the need to thoroughly clean the equipment and due to the difficulty in accurately quantifying all chemicals of concern in such samples. The latter is due to the need to dilute such samples such that the detection limits for some of the COCs are elevated to a degree that the concentrations of the chemicals cannot be meaningfully quantified. Therefore, the Department has not made any change to the paragraphs immediately preceding Subsection 9.1.

COMMENT: Ms. Eighmey states that the second bulleted list in Subsection 10.1 contains two references to “LNAPL” in two places. She suggests deleting the first reference and changing the second to “free product.”

RESPONSE: The Department does not agree with Ms. Eighmey’s suggestions. The sentence preceding the second bulleted list in Subsection 10.1 reads: “The overall objective of a [Corrective Action Plan] is to ensure that:” The third bullet thereafter correctly explains the conditions related to LNAPL and free product that the Corrective Action Plan is to address or prevent. However, upon review, the Department finds the language in the third bullet of the second bulleted list in Subsection 10.1 is unclear with regard to whether the conditions stated there pertain to LNAPL, free product, or both.

To ensure the requirements of Subsection 10.1 are clear, the Department has revised the language of the third bullet in the second bulleted list in the subsection to read as follows: “Mobile or immobile light non-aqueous phase liquids (LNAPL; mobile LNAPL is referred to as “free product”) are not present in the soil or groundwater in volumes that will result in any of the following conditions: (i) an expanding free product plume in soil or groundwater, (ii) an expanding dissolved plume, (iii) unacceptable risk to human health or the environment, and (iv) explosive or fire hazard.”

These changes are based on the Department’s contention that an expanding dissolved phase contaminant plume and unacceptable risk to human health or the environment could be caused by either LNAPL or free product. We contend that the same is arguably true with respect to the creation of an explosion or fire hazard as well. However, we acknowledge that only free product is subject to migration and therefore have replaced “LNAPL” at (i) with “free product.”

COMMENT: Ms. Eighmey comments that the numbering of the footnotes in Appendix C of the updated guidance may need to be corrected.

RESPONSE: The Department thanks Ms. Eighmey for the comment and has ensured that the numbering of the footnotes is correct.

COMMENT: Mr. Greenwalt stated that, overall, he has no major concerns with what the new rules or Tanks RBCA guidance document contain and that he believes the Department, the Petroleum Storage Tank Insurance Fund, and the Missouri Petroleum Marketers and Convenience Store Association put forth a great effort to collaborate and compromise on a streamlined document that will hopefully make the RBCA process less cumbersome and help facilitate site closures. Mr. Greenwalt further stated that, while this latest version of the RBCA guidance might not be perfect, it is clearly an improvement over the previous version of the guidance based on the consolidation and elimination of redundancy and useless requirements.

RESPONSE: The Department appreciates Mr. Greenwalt's support of this rulemaking effort.

COMMENT: Mr. Greenwalt stated that he has a few comments on the requirements contained in Subsection 6.1.1.2 (Determination of Reasonably Anticipated Future Land Use (RAFU)) of the updated RBCA guidance and, more importantly, the administration of this particular section by the Department's project managers. He goes on to say that he is not strongly opposed to the addition of "interviews with property owners" to the list of factors in Subsection 6.1.1.2 that may be used to determine the RAFU of a property, but rather that he disagrees with the disproportionate amount of weight given to this factor by the Department's project managers.

RESPONSE: Most of the comments submitted by Mr. Greenwalt pertain to how the Department implements those parts of the guidance pertaining to RAFU decisions – in particular how information from property owners is gathered and managed – rather than to the language of the amended rules or the updated guidance themselves. Rulemaking public comment periods, including the comment period for this rulemaking, provide the public with an opportunity to submit comments in support, comments in opposition or comments suggesting edits to the specific proposed rules and any material to be incorporated by reference. Mr. Greenwalt's comments pertaining to the Department's implementation of the guidance to be incorporated by reference are therefore outside of the scope of the rulemaking and the Department has not responded to those in this Order of Rulemaking. In addition, in his comments, Mr. Greenwalt does not suggest any changes to the rules or the updated guidance document.

COMMENT: Mr. Greenwalt states that, although the updated Tanks RBCA guidance document has not been accepted by the Hazardous Waste Commission, some of the Department's project

managers have, for some time, been requiring (not simply requesting) that information regarding future property use be obtained from current property owners.

RESPONSE: The statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Jordan commended the Department for its efforts to develop a broad consensus on complex and difficult topics.

RESPONSE: The Department thanks Mr. Jordan for his comment.

COMMENT: Mr. Jordan stated that his sole comment pertains to Subsection 6.1.1.2 of the updated Tanks RBCA guidance. He suggested that “interviews with current property owners” be deleted from the subsection and replaced by “information obtained from current property owners by the Consultant or the Responsible Party.”

RESPONSE: The Department does not agree with Mr. Jordan’s suggestion because the suggested language would limit the Department’s ability to obtain information from current property owners. The Department believes it is both reasonable and appropriate for its project managers to gather information from property owners, whether in lieu of a consultant or responsible party or in order to verify information submitted by a consultant or responsible party. The Department’s role of overseeing RBCA evaluations includes verifying information submitted by consultants by contacting or finding other, additional sources of information.

In addition, the statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Leone stated that the Missouri Petroleum Marketers & Convenience Store Association (MPCA) “fully supports and incorporates herein by reference both the written comments being submitted by Mark Jordan & Donnie Greenwalt with Wallis Companies and the 8/15/13 public testimony presented by the Petroleum Storage Tank Insurance Fund (PSTIF).”

RESPONSE: The Department's responses to the comments submitted by Mr. Greenwalt, Mr. Jordan, and Ms. Eighmey are contained within this Order of Rulemaking.

COMMENT: Mr. Leone stated that "MPCA believes the proposed RBCA rule changes are for the most part necessary, reasonable [and] measured, and we ask that you seriously consider the comments and suggestions provided by both PSTIF and Wallis Companies."

RESPONSE: The Department thanks Mr. Leone for the comment. The Department has given serious consideration to all of the comments submitted and has provided a response to each in this Order of Rulemaking.

COMMENT: Mr. Leone thanked Department staff for their hard work to develop the amendments and update the Tanks RBCA guidance.

RESPONSE: The Department thanks Mr. Leone for his comments recognizing the work of Department staff in relation to this rulemaking.

10 CSR 26-2.078 Investigations for Soil and Groundwater Cleanup

(3) Owners and operators shall follow a written procedure.

(C) Written procedures.

1. *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tank* guidance document, October 17, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

Title 10 – DEPARTMENT OF NATURAL RESOURCES
Division 26 – Petroleum and Hazardous Substance Storage Tanks
Chapter 2 – Underground Storage Tanks – Technical Regulations

ORDER OF RULEMAKING

By the authority vested in the Hazardous Waste Management Commission (Commission) under Sections 319.109 and 319.137, RSMo (Supp. 2010), the Commission hereby adopts an amendment as follows:

10 CSR 26-2.082

A notice of proposed rulemaking containing the text of the amended rule was published in the *Missouri Register* on July 15, 2013 (38 MoReg 1160 – 1163). This amendment becomes effective thirty (30) days after publication in the *Code of State Regulations*.

SUMMARY OF COMMENTS: A public hearing was held on August 15, 2013, and the public comment period ended on August 22, 2013. The Missouri Department of Natural Resources' Hazardous Waste Program received thirty-three (33) comments regarding the guidance document proposed for incorporation by reference at section (5)(C)1 of the amended rule. The comments came from five (5) sources, as follows: Brian Porter, Terracon; Carol Eighmey, Petroleum Storage Tank Insurance Fund; Donnie Greenwalt, Wallis Companies; Mark Jordan, Wallis Companies; and Ron Leone, Missouri Petroleum Marketers and Convenience Store Association. The Hazardous Waste Program did not receive any comments regarding the rule language itself. However, Department staff have determined that changes made to the January 1, 2013, version of the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document as a result of comments received during the public comment period necessitate that the date of the guidance be changed in the rule in order to differentiate the final guidance from the January 1, 2013, version. The Department proposes to revise subsection (5)(C)1 of 10 CSR 26-2.082 to reflect a guidance publication date of October 17, 2013.

COMMENT: Brian Porter stated the following: “One of the main reasons for revising the tanks Missouri Risk-Based Corrective Action (MRBCA) guidance was a desire to update its risk-based levels with the most current toxicological data and scientific methodology utilized by the Environmental Protection Agency (EPA) and other federal and state agencies. The result would be consistent target levels for Missouri’s tanks and Brownfield Voluntary Cleanup Program (B/VCP) that are in line with the most current information used throughout the country.

The proposed updates to the tanks guidance include revisions to the target levels so that they are consistent with the departmental [MRBCA] target levels currently in use. However, we

understand that a forthcoming update to the departmental guidance will further update its target levels. If the updates to the tanks guidance occur as currently scheduled, Missouri's guidance documents will contain consistent target levels for only a very brief period (a matter of months at most). Thereafter, the guidance documents will conflict with each other once again. Acknowledging that the tanks guidance process has been delayed several times already, it seems prudent to delay it one more time so that both it and the departmental guidance can benefit from the latest toxicological and scientific methodology.”

RESPONSE: Mr. Porter's understanding regarding the Department's updating of the Departmental Risk-Based Target Levels (RBTLs) is correct; the Department has begun that effort and expects draft updated RBTLs to be developed by the end of 2013. Sometime thereafter, the draft RBTLs will be the subject of a 60-day public comment period. Mr. Porter is also correct in his statement that the Department's updating of the Departmental RBTLs will result in those RBTLs differing from the RBTLs in the Tanks Risk-Based Corrective Action (RBCA) guidance.

The RBTLs in the updated Tanks RBCA guidance are based on methodology and toxicity and other inputs that were current in 2009. While the Department is aware that the methodology and inputs have changed since that time, and despite the Department's preference that the RBTLs in both RBCA documents be the same, the updated Tanks RBCA guidance associated with this rulemaking is the result of protracted negotiations between the Department and Tanks stakeholders during 2012 and early 2013. Those negotiations resulted in all parties agreeing to move ahead with the 2009 RBTLs. As the Department's efforts to revise the Departmental RBTLs have only recently begun, and we cannot ensure that the update will be completed on the anticipated schedule, the Department will move ahead with the 2009 RBTLs (that are consistent with the current Departmental RBTLs) that are found in the Tanks RBCA guidance associated with this rulemaking.

COMMENT: Carol Eighmey stated that much duplicative, inconsistent, or erroneous language in the previous version of the Tanks RBCA guidance has been eliminated or corrected with this update of the guidance, and that this alone makes this rulemaking a worthwhile endeavor.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this rulemaking.

COMMENT: Ms. Eighmey pointed out that the Department's proposed rulemaking eliminates the requirement to use standardized forms in various reports, and that this is “a huge improvement.” She stated that the requirement to use these standardized forms is now clearly obsolete and that some of the forms are no longer even accurate. Ms. Eighmey indicated that the PSTIF looks forward to the elimination of this requirement.

RESPONSE: The Department appreciates Ms. Eighmey's comment in support of this change.

COMMENT: Ms. Eighmey stated "the proposed rulemaking *does* impose some new requirements and changes some of the numerical cleanup standards. We have reviewed the proposed changes and – while we're not fans of all of them, and some of them will increase costs – we nevertheless believe they are reasonable and can be implemented without *unduly* increasing costs."

RESPONSE: The Department appreciates Ms. Eighmey's understanding and support of the new requirements.

COMMENT: Ms. Eighmey stated that what has been accomplished with this rulemaking and guidance update – "while it undoubtedly falls short of perfect – is a *significant and substantial* step forward, and one that is long overdue."

RESPONSE: The Department agrees with Ms. Eighmey's comment and appreciates her support of the rulemaking.

COMMENT: Ms. Eighmey stated that the first paragraph in Subsection 1.1 of the updated Tanks RBCA guidance accurately refers to the 2004 RBCA guidance document as "draft guidance." She suggests that the first sentence in the second paragraph of the subsection be revised as follows: "In 2005, the process provided for by the **draft** guidance was modified..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of Subsection 1.1 has been changed to read: "In 2005, the process provided for by the draft guidance was modified by the addition of six supplemental guidance documents."

COMMENT: Ms. Eighmey stated that the second sentence in Subsection 2.1 of the updated guidance refers to Section 1.3 of the Guidance Document, which will no longer exist. She suggests deleting the phrase, "...as discussed at Section 1.3 of this document..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 2.1 has been revised to read: "The MRBCA process begins when a petroleum release is suspected or discovered and includes all subsequent activities (except those conducted under 260.500 through 260.550 RSMo and the regulations promulgated thereunder) until MDNR issues a 'No Further Action' (NFA) letter for the release."

COMMENT: Ms. Eighmey suggests renaming Subsection 2.2.1 of the updated guidance “**Release** Discovery” instead of “Site Discovery,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. Subsection 2.2.1 of the updated guidance has been renamed “Release Discovery.”

In addition, the Department has changed the first sentence of Subsection 2.2.1 of the updated guidance to refer to the discovery of a release at an underground storage tank (UST)/above ground storage tank (AST) site rather than the discovery of “contamination.” In addition, “site” also appeared in the second and third sentences of Subsection 2.2.1 as well as the first sentence of the second paragraph of the subsection. Where appropriate, the Department has changed the use of “site” in the subsection to “release,” as follows:

“The MRBCA process begins with the discovery of a release at a UST/AST site. A release might be discovered and reported to the MDNR under a variety of circumstances including, but not limited to, (i) system closure, (ii) a site check investigation resulting in confirmation of a release, and (iii) identification of an imminent hazard (e.g., vapors in sewers or buildings, etc.). Releases might also be identified during investigations conducted as a part of real estate transactions, investigations conducted in anticipation of land development, and the occurrence of accidents and spills.

The release discovery process should generally result in the identification of affected media at a site and generate analytical data. This initial data should, ideally, represent the point or points of release, the chemicals of concern (COCs), and the maximum concentrations of the COCs.”

COMMENT: Ms. Eighmey suggests revising the fourth sentence of Subsection 2.4 of the updated guidance as follows, “Such communication must occur throughout the MRBCA process, from **release** discovery to issuance...,” to be consistent with other language in the Guidance.

RESPONSE: The Department accepts Ms. Eighmey’s comment. The fourth sentence of Subsection 2.4 has been revised to read: “Such communication must occur throughout the MRBCA process, from release discovery to issuance of a NFA letter, so that interested parties can determine if decisions made and activities undertaken during the MRBCA process at a site were sufficient to adequately protect human health and the environment.”

COMMENT: Ms. Eighmey suggests revising the first sentence of the second paragraph of Subsection 3.1 of the updated guidance as follows: “...may ultimately lead to ~~site~~ discovery **of a release**.”

RESPONSE: The Department accepts Ms. Eighmey's comment. The first sentence of the second paragraph of Subsection 3.1 has been revised to read: "A number of different events may trigger site-specific activities that may ultimately lead to release discovery."

COMMENT: Ms. Eighmey stated that, since an explicit list of required photographs is being added to the guidance, the previous, less-precise sentence toward the end of Subsection 4.4.1 that says, "During the tank closure process, sufficient color photographs shall be collected to document the condition of tanks, excavation, pads, etc. and submitted with the closure report" should be deleted.

RESPONSE: The Department accepts the comment. The second-to-last sentence in Subsection 4.4.1 has been deleted from the updated guidance.

COMMENT: Ms. Eighmey suggests revising Subsection 4.5.8 of the updated guidance to more accurately describe current practices, as follows: "If treatment will be via on-site landfarming, **approval must be obtained from MDNR's Tanks Section as part of the Corrective Action Plan (CAP) for the petroleum release. Off-site landfarms require a permit issued by MDNR's Water Protection Program (WPP);** for information ~~concerning landfarm permits,~~ contact MDNR's WPP at ..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of Subsection 4.5.8 has been revised to read: "If treatment will be via on-site landfarming, approval must be obtained from MDNR's Tanks Section as part of the CAP for the petroleum release. Off-site landfarms require a permit issued by MDNR's WPP; for information, contact MDNR's WPP at (573) 751-1300."

COMMENT: Ms. Eighmey suggests revising the last item in the third bulleted list of Subsection 5.1 to be consistent with change to terminology made throughout the document, as follows: "Information about corrective action measures ~~or risk management activities~~ that have been conducted and are planned."

RESPONSE: The Department accepts Ms. Eighmey's comment. The last item in third bulleted list has been revised to read: "Information about corrective action measures that have been conducted and are planned."

COMMENT: Also in Subsection 5.1, Ms. Eighmey suggests revising the first sentence of the paragraph following the third bulleted list as follows: "...beyond that discussed herein might be required to develop a **Corrective Action Plan** or to complete a Tier3..."

RESPONSE: The Department accepts Ms. Eighmey’s comment. The first sentence in the paragraph following the third bulleted list in Subsection 5.1 has been revised to read: “Note: Additional data beyond that discussed herein might be required to develop a Corrective Action Plan (CAP) or to complete a Tier 3 risk assessment.”

COMMENT: Ms. Eighmey states that the first paragraph of Subsection 5.2 of the updated guidance appears to have been written in 2004 to help owners and their consultants understand how to transition to the new MRBCA Guidance. She indicates that the paragraph is largely obsolete today and – as a summary of the RBCA process – discusses in a general way the tasks that are more specifically presented throughout the document. Ms. Eighmey suggests deleting the entire paragraph.

RESPONSE: The Department accepts Ms. Eighmey’s comment in part. The Department believes some of the language in the first paragraph of Subsection 5.2 is valuable and therefore should be retained. The paragraph has been revised to read as follows: “As part of the MRBCA evaluation, the person undertaking the evaluation must carefully review all existing data and identify any data gaps. Only after all the necessary data have been collected and full site characterization is complete should the person undertaking the evaluation proceed with the development of target levels.”

COMMENT: Ms. Eighmey points out that the second paragraph of Subsection 5.4.5 of the updated guidance references MEGA, a compilation of data that is now obsolete. She suggests revising the paragraph as follows: “Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and “CARES” maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>.”

RESPONSE: The Department accepts Ms. Eighmey’s comment. The second paragraph of Subsection 5.4.5 has been revised to read: “Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and Center for Applied Research and Environmental Systems or “CARES” maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>.”

COMMENT: Ms. Eighmey states that the last paragraph of the text added to Subsection 5.6.4 as part of the guidance update advises the reader to “refer to Subsection 5.8 for developing a sampling plan for VWC.” She indicates that, though Subsection 5.8 contains helpful information for designing one’s sampling plan, it is not specific to volumetric water content (VWC). Ms. Eighmey suggests deleting the words “for VWC” from the text in Subsection 5.6.4.

RESPONSE: The Department accepts Ms. Eighmey's comment. The last paragraph of Subsection 5.6.4 has been revised to read: "Refer to Subsection 5.8 for developing a sampling plan. Because VWC varies over time most significantly in surficial soil, VWC data should not be collected from surficial soil (i.e., 0 – 3') except when the foundation of an existing building is less than 3' deep."

COMMENT: Ms. Eighmey states that Subsection 5.9.1 conflicts with information contained in Subsection 6.3.3 regarding point of demonstration (POD) and point of exposure (POE). She suggests that the subsection be revised accordingly.

RESPONSE: The Department does not agree that the two subsections are in conflict, because Subsection 5.9.1 pertains to delineation of contaminants in groundwater whereas Subsection 6.3.3 pertains to the evaluation of the groundwater use pathway. Even so, the Department has added the following sentence to the end of the last paragraph of Subsection 6.3.3 for clarity: "In every case of groundwater contamination and notwithstanding the foregoing, contaminants in groundwater shall be delineated in accordance with Subsection 5.9.1 of this guidance."

COMMENT: Ms. Eighmey comments that the Department accepts Method 3511 for total petroleum hydrocarbons-diesel range organics (TPH-DRO), as long as the lab meets the same detection limits and quality assurance/quality control (QA/QC) requirements as for other methods. She suggests that Method 3511 be added to Table 5-1 as an option for TPH-DRO.

RESPONSE: The Department does not accept Ms. Eighmey's comment. Method 3511 is a micro-extraction procedure; it is not an analysis procedure to quantify concentrations of COCs. The information in Table 5-1 includes analysis procedures. While the Tanks Section has approved the use of Method 3511, the guidance is not structured to include such extraction methods, but rather only analytical methods. Therefore, the Department has not made the suggested addition.

COMMENT: Ms. Eighmey suggests that the following sentence be inserted into the updated guidance at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate dermal contact risk associated with soil or groundwater exposures in the areas of the property where tanks/piping are located."

RESPONSE: The Department agrees with the essence of Ms. Eighmey's comment, but not all of the suggested language. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. In that memorandum,

the scope of the exception described in the memo and Ms. Eighmey's comment is limited to the tank pit as defined in the memorandum. The Department intends for the language to be added at the end of Subsection 6.1.2.1 to reflect the scope defined in the memorandum. Therefore, in response to this comment, the Department has inserted the following language at the end of Subsection 6.1.2.1: "Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate the soil ingestion, inhalation, and dermal contact exposure pathway nor the dermal contact with groundwater exposure pathway for the construction worker receptor in the area in which an active underground storage tank (i.e., the tank pit) is located."

COMMENT: Ms. Eighmey suggests inserting the following sentence at the end of Subsection 6.1.3.1: "At an active tank facility, the exposure model can assume no building will be constructed over the tank pit or where the dispensers are located."

RESPONSE: The Department accepts Ms. Eighmey's comment in part. The subject of the comment was also the subject of a July 3, 2013, memorandum from Aaron Schmidt of the Department to which Ms. Eighmey referred in her oral comments to the Hazardous Waste Management Commission at the August 15, 2013, public hearing regarding the subject rule amendments and updated guidance. With respect to the exposure model limitation, the memorandum states "When evaluating the indoor inhalation of vapors exposure pathways for soil and groundwater for a future residential or non-residential land use scenario, the tank pit need not be included in the evaluation. All areas outside of the tank pit shall be included in the evaluation." The Department has not incorporated Ms. Eighmey's suggested language "where the dispensers are located" into the subsection because the memorandum applies only to the tank pit. The Department intends for the language added at the end of Subsection 6.1.3.1 to be consistent with Mr. Schmidt's memorandum. Therefore, the Department has added the following language to the end of Subsection 6.1.3.1: "The exposure model for an active tank facility may assume that no building will be constructed over the tank pit."

COMMENT: So that the text will match the terminology used in Table 7-4, Ms. Eighmey suggests that the third paragraph of Subsection 7.5 of the updated guidance be revised as follows: "Depending on this distance and the **depth** to groundwater..."

RESPONSE: The Department accepts Ms. Eighmey's comment. The second sentence of the third paragraph of Subsection 7.5 has been revised to read: "Depending on this distance and the depth to groundwater, as discussed above, soil concentrations protective of groundwater will be selected from Tables 7-4(a), 7-4(b), or 7-4(c)."

COMMENT: Ms. Eighmey states that the text added (during updating of the guidance) just before Subsection 9.1 references "light non-aqueous phase liquid" and "LNAPL" in several

places. She asks whether this paragraph should use the term “free product” instead of “light non-aqueous phase liquid” or “LNAPL.”

RESPONSE: The Department feels the use of “LNAPL” rather than “free product” is appropriate in the paragraphs just before Subsection 9.1 because the analytical limitations that necessitate the requirements stated in the paragraphs pertain equally to both mobile (i.e., “free product”) and immobile LNAPL. In the experience of the Department, analytical laboratories frequently refrain from analyzing grossly contaminated samples (i.e., samples with mobile and/or immobile LNAPL) because such samples can result in equipment being out of use for extended periods due to the need to thoroughly clean the equipment and due to the difficulty in accurately quantifying all chemicals of concern in such samples. The latter is due to the need to dilute such samples such that the detection limits for some of the COCs are elevated to a degree that the concentrations of the chemicals cannot be meaningfully quantified. Therefore, the Department has not made any change to the paragraphs immediately preceding Subsection 9.1.

COMMENT: Ms. Eighmey states that the second bulleted list in Subsection 10.1 contains two references to “LNAPL” in two places. She suggests deleting the first reference and changing the second to “free product.”

RESPONSE: The Department does not agree with Ms. Eighmey’s suggestions. The sentence preceding the second bulleted list in Subsection 10.1 reads: “The overall objective of a [Corrective Action Plan] is to ensure that:” The third bullet thereafter correctly explains the conditions related to LNAPL and free product that the Corrective Action Plan is to address or prevent. However, upon review, the Department finds the language in the third bullet of the second bulleted list in Subsection 10.1 is unclear with regard to whether the conditions stated there pertain to LNAPL, free product, or both.

To ensure the requirements of Subsection 10.1 are clear, the Department has revised the language of the third bullet in the second bulleted list in the subsection to read as follows: “Mobile or immobile light non-aqueous phase liquids (LNAPL; mobile LNAPL is referred to as “free product”) are not present in the soil or groundwater in volumes that will result in any of the following conditions: (i) an expanding free product plume in soil or groundwater, (ii) an expanding dissolved plume, (iii) unacceptable risk to human health or the environment, and (iv) explosive or fire hazard.”

These changes are based on the Department’s contention that an expanding dissolved phase contaminant plume and unacceptable risk to human health or the environment could be caused by either LNAPL or free product. We contend that the same is arguably true with respect to the creation of an explosion or fire hazard as well. However, we acknowledge that only free product is subject to migration and therefore have replaced “LNAPL” at (i) with “free product.”

COMMENT: Ms. Eighmey comments that the numbering of the footnotes in Appendix C of the updated guidance may need to be corrected.

RESPONSE: The Department thanks Ms. Eighmey for the comment and has ensured that the numbering of the footnotes is correct.

COMMENT: Mr. Greenwalt stated that, overall, he has no major concerns with what the new rules or Tanks RBCA guidance document contain and that he believes the Department, the Petroleum Storage Tank Insurance Fund, and the Missouri Petroleum Marketers and Convenience Store Association put forth a great effort to collaborate and compromise on a streamlined document that will hopefully make the RBCA process less cumbersome and help facilitate site closures. Mr. Greenwalt further stated that, while this latest version of the RBCA guidance might not be perfect, it is clearly an improvement over the previous version of the guidance based on the consolidation and elimination of redundancy and useless requirements.

RESPONSE: The Department appreciates Mr. Greenwalt's support of this rulemaking effort.

COMMENT: Mr. Greenwalt stated that he has a few comments on the requirements contained in Subsection 6.1.1.2 (Determination of Reasonably Anticipated Future Land Use (RAFU)) of the updated RBCA guidance and, more importantly, the administration of this particular section by the Department's project managers. He goes on to say that he is not strongly opposed to the addition of "interviews with property owners" to the list of factors in Subsection 6.1.1.2 that may be used to determine the RAFU of a property, but rather that he disagrees with the disproportionate amount of weight given to this factor by the Department's project managers.

RESPONSE: Most of the comments submitted by Mr. Greenwalt pertain to how the Department implements those parts of the guidance pertaining to RAFU decisions – in particular how information from property owners is gathered and managed – rather than to the language of the amended rules or the updated guidance themselves. Rulemaking public comment periods, including the comment period for this rulemaking, provide the public with an opportunity to submit comments in support, comments in opposition or comments suggesting edits to the specific proposed rules and any material to be incorporated by reference. Mr. Greenwalt's comments pertaining to the Department's implementation of the guidance to be incorporated by reference are therefore outside of the scope of the rulemaking and the Department has not responded to those in this Order of Rulemaking. In addition, in his comments, Mr. Greenwalt does not suggest any changes to the rules or the updated guidance document.

COMMENT: Mr. Greenwalt states that, although the updated Tanks RBCA guidance document has not been accepted by the Hazardous Waste Commission, some of the Department's project

managers have, for some time, been requiring (not simply requesting) that information regarding future property use be obtained from current property owners.

RESPONSE: The statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Jordan commended the Department for its efforts to develop a broad consensus on complex and difficult topics.

RESPONSE: The Department thanks Mr. Jordan for his comment.

COMMENT: Mr. Jordan stated that his sole comment pertains to Subsection 6.1.1.2 of the updated Tanks RBCA guidance. He suggested that “interviews with current property owners” be deleted from the subsection and replaced by “information obtained from current property owners by the Consultant or the Responsible Party.”

RESPONSE: The Department does not agree with Mr. Jordan’s suggestion because the suggested language would limit the Department’s ability to obtain information from current property owners. The Department believes it is both reasonable and appropriate for its project managers to gather information from property owners, whether in lieu of a consultant or responsible party or in order to verify information submitted by a consultant or responsible party. The Department’s role of overseeing RBCA evaluations includes verifying information submitted by consultants by contacting or finding other, additional sources of information.

In addition, the statement “interviews with property owners” in Subsection 6.1.1.2 of the updated Tanks RBCA guidance is not new language; the same language appeared in Subsection 5.5.2 of the 2004 version of the Tanks RBCA guidance. Along with other information in Subsection 5.5.2 of the 2004 guidance, the statement “interviews with property owners” was moved to Subsection 6.1.1.2 of the updated guidance in order to consolidate in Section 6 information related to RAFU.

COMMENT: Mr. Leone stated that the Missouri Petroleum Marketers & Convenience Store Association (MPCA) “fully supports and incorporates herein by reference both the written comments being submitted by Mark Jordan & Donnie Greenwalt with Wallis Companies and the 8/15/13 public testimony presented by the Petroleum Storage Tank Insurance Fund (PSTIF).”

RESPONSE: The Department's responses to the comments submitted by Mr. Greenwalt, Mr. Jordan, and Ms. Eighmey are contained within this Order of Rulemaking.

COMMENT: Mr. Leone stated that "MPCA believes the proposed RBCA rule changes are for the most part necessary, reasonable [and] measured, and we ask that you seriously consider the comments and suggestions provided by both PSTIF and Wallis Companies."

RESPONSE: The Department thanks Mr. Leone for the comment. The Department has given serious consideration to all of the comments submitted and has provided a response to each in this Order of Rulemaking.

COMMENT: Mr. Leone thanked Department staff for their hard work to develop the amendments and update the Tanks RBCA guidance.

RESPONSE: The Department thanks Mr. Leone for his comments recognizing the work of Department staff in relation to this rulemaking.

10 CSR 26-2.082 Corrective Action Plan

(5) Owners and operators shall follow a written procedure

(C) Written procedures.

1. *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document, January 1, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

10 CSR 26-2.062 Assessing the Site at Closure or Change in Service

PURPOSE: This rule describes the requirements of a site assessment to determine whether there has been a release from the underground storage tank system.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Before permanent closure or a change in service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the underground storage tank (UST) site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release.

(2) If one or more contaminants in soil or groundwater at concentrations above the default target levels in Table 3-1 of the guidance referenced at section (3)(A) of this rule or free product as a liquid or vapor is discovered under section (1) of this rule, or by any other manner, owners and operators must begin site investigation and corrective action in 10 CSR 26-2.070–10 CSR 26-2.083.

(3) Owners and operators shall follow a written procedure.

(A) To comply with this rule, owners and operators may use the *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document, October 17, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

(B) Other written procedures may be used with prior written approval of the department.

*AUTHORITY: section 319.111, RSMo 2000, and section 319.137, RSMo Supp. 2010. * This rule originally filed as 10 CSR 20-10.072. Original rule filed April 2, 1990, effective Sept. 28, 1990. Amended: Filed Aug. 3, 1993, effective April 9, 1994. Moved and amended: Filed April 15, 2011, effective Dec. 30, 2011.*

**Original authority: 319.111, RSMo 1989 and 319.137, RSMo 1989, amended 1993, 1995, 2004.*

PUBLIC COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS:

The Missouri Hazardous Waste Management Commission will hold a public hearing on this rule action and others beginning at 10:30 a.m. on August 15, 2013, at the Elm Street Conference Center, 1738 East Elm Street, Jefferson City, Missouri. Any interested person will have the opportunity to testify. Advance notice is not required. However, anyone who wants to make arrangements to testify may do so prior to the hearing by contacting the secretary of the Hazardous Waste Management Commission at (573) 751-2747.

Any person may submit written comments on this rule action. Written comments shall be sent to the director of the Hazardous Waste Program at PO Box 176, Jefferson City, MO 65102-0176. To be accepted, written comments must be postmarked by midnight on August 22, 2013. Faxed or emailed correspondence will not be accepted.

Please direct all inquiries to the Rules Coordinator of the Hazardous Waste Program, at 1738 E. Elm, Jefferson City, MO 65102, telephone (573) 751-3176.

10 CSR 26-2.078 Investigations for Soil and Groundwater Cleanup

PURPOSE: This rule describes the procedures for soil and groundwater investigations.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Owners and operators must conduct investigations of the release, the release site, and the surrounding area to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the groundwater if any of the following conditions exist:

(A) There is evidence that groundwater wells have been affected by the release (for example, as found during release confirmation or previous corrective action measures);

(B) Free product is found to need recovery in compliance with 10 CSR 26-2.075;

(C) There is evidence that contaminated soils may be in contact with groundwater as found during the initial response measures or investigations required under 10 CSR 26-2.070–10 CSR 26-2.075;

(D) Contaminant concentrations in soil or groundwater exceed the Default Target Levels in Table 3-1 of the guidance referenced at section (3)(C)1 of this rule; or

(E) The department requests an investigation based on the potential effects of contaminated soil or groundwater on nearby surface and groundwater resources.

(2) Owners and operators must submit the information collected under section (1) of this rule as soon as practicable or in accordance with a schedule established by the department.

(3) Owners and operators shall follow a written procedure.

(A) For releases that occurred or were discovered on or after the effective date of this rule, owners and operators shall use the document referenced at section (3)(C)1 of this rule or, with prior written approval of the department, another written procedure.

(B) For releases that occurred or were discovered prior to the effective date of this rule, owners and operators may use:

1. The documents referenced at section (3)(C)2 of this rule, provided:

a. Prior to the effective date of this rule, the owner or operator received the department's written approval of a work plan for site characterization, risk assessment, or corrective action related to the release; and

b. The owner or operator implements or implemented the approved work plan within one (1) year of the date of the department's approval of the plan or in accordance with a different schedule approved by the department;

2. The document referenced at section (3)(C)1 of this rule; or

3. With the prior written approval of the department, another written procedure.

(C) Written procedures.

1. *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document, October 17, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

2. *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks*, February 2004, as amended March 8, 2005, by *Notice of Modifications to the Process and Interim Guidance Pertaining to Application of the New Soil Type Dependent Tier 1 Risk-Based Target Levels*; the March 18, 2005, *Soil Type Determination Guidelines*; the March 3, 2005, Table 3-1 Default Target Levels; the April 2005 Table 4-1 Soil Concentration Levels to Determine the Need for Groundwater Evaluation During Tank Closure; the February 2005 Tables 7-1(a) through 7-12(c) Tier 1 Risk-Based Target Levels; and the April 21, 2005, *Soil Gas Sampling Protocol*, which are hereby incorporated by reference without any subsequent amendments or additions, and are published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

AUTHORITY: sections 319.109 and 319.137, RSMo Supp. 2010.* This rule originally filed as 10 CSR 20-10.065. Original rule filed April 2, 1990, effective Sept. 28, 1990. Amended: Filed Aug. 3, 1993, effective April 9, 1994. Moved and amended: Filed April 15, 2011, effective Dec. 30, 2011.

*Original authority: 319.109, RSMo 1989, amended 1995, 2004, 2008 and 319.137, RSMo 1989, amended 1993, 1995, 2004.

PUBLIC COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS:

The Missouri Hazardous Waste Management Commission will hold a public hearing on this rule action and others beginning at 10:30 a.m. on August 15, 2013, at the Elm Street Conference Center, 1738 East Elm Street, Jefferson City, Missouri. Any interested person will have the opportunity to testify. Advance notice is not required. However, anyone

who wants to make arrangements to testify may do so prior to the hearing by contacting the secretary of the Hazardous Waste Management Commission at (573) 751-2747.

Any person may submit written comments on this rule action. Written comments shall be sent to the director of the Hazardous Waste Program at PO Box 176, Jefferson City, MO 65102-0176. To be accepted, written comments must be postmarked by midnight on August 22, 2013. Faxed or emailed correspondence will not be accepted.

Please direct all inquiries to the Rules Coordinator of the Hazardous Waste Program, at 1738 E. Elm, Jefferson City, MO 65102, telephone (573) 751-3176.

10 CSR 26-2.082 Corrective Action Plan

PURPOSE: This rule lists the requirements for corrective action plans for cleanup of releases from underground storage tank sites.

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment, as determined by the department, after fulfilling the requirements for release reporting and investigation in 10 CSR 26-2.071–10 CSR 26-2.074. Owners and operators must modify their plan as necessary to meet this standard.

(A) The department may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater at any point after reviewing the information submitted for release reporting and investigation in 10 CSR 26-2.071–10 CSR 26-2.074. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the department.

(B) Owners and operators may choose to submit a corrective action plan for responding to contaminated soil and groundwater after fulfilling the requirements of 10 CSR 26-2.071–10 CSR 26-2.074.

(2) The department will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health and safety and the environment. In making this determination the department should consider the following factors as appropriate:

(A) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence and potential for migration;

(B) The hydrogeologic characteristics of the facility and the surrounding area;

(C) The proximity, quality, and current and future uses of nearby surface and ground water;

(D) The potential effects of residual contamination on nearby surface and ground water;

(E) An exposure assessment; and

(F) Any information assembled in 10 CSR 26-2.070–10 CSR 26-2.083.

(3) Upon approval of the corrective action plan, or as directed by the department, owners and operators must implement the plan including modifications to the plan made by the department. Owners and operators must monitor, evaluate and report the results of implementing the plan in accordance with a schedule and in a format established by the department.

(4) Owners and operators, in the interest of minimizing environmental contamination and promoting more effective clean-up, may begin clean-up of soil and groundwater before the corrective action plan is approved provided that they—

(A) Notify the department of their intention to begin clean-up;

(B) Comply with any conditions imposed by the department, including halting clean-up or mitigating adverse consequences from clean-up activities; and

(C) Incorporate these self-initiated clean-up measures in the corrective action plan that is submitted to the department for approval.

(5) Owners and operators shall follow a written procedure

(A) For releases that occurred or were discovered on or after the effective date of this rule, owners and operators shall use the document referenced at section (5)(C)1 of this rule or, with prior written approval of the department, another written procedure.

(B) For releases that occurred or were discovered prior to the effective date of this rule, owners and operators may use:

1. The documents referenced at section (5)(C)2 of this rule, provided:

a. Prior to the effective date of this rule, the owner or operator received the department's written approval of a work plan for site characterization, risk assessment, or corrective action related to the release; and

b. The owner or operator implements or implemented the approved work plan within one (1) year of the date of the department's approval of the plan or in accordance with a different schedule approved by the department;

2. The document referenced at section (5)(C)1 of this rule, or

3. With the prior written approval of the department, another written procedure.

(C) Written procedures.

1. *Missouri Risk-Based Corrective Action Process for Petroleum Storage Tanks* guidance document, October 17, 2013, which is hereby incorporated by reference without any subsequent amendments or additions, and is published by the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102-0176.

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*AUTHORITY: sections 319.109 and 319.137, RSMo Supp. 2010. * This rule originally filed as 10 CSR 20-10.066. Original rule filed April 2, 1990, effective Sept. 28, 1990. Amended: Filed Aug. 3, 1993, effective April 9, 1994. Moved and amended: Filed April 15, 2011, effective Dec. 30, 2011.*

**Original authority: 319.109, RSMo 1989, amended 1995, 2004, 2008 and 319.137, RSMo 1989, amended 1993, 1995, 2004.*

PUBLIC COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars (\$500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS:

The Missouri Hazardous Waste Management Commission will hold a public hearing on this rule action and others beginning at 10:30 a.m. on August 15, 2013, at the Elm Street Conference Center, 1738 East Elm Street, Jefferson City, Missouri. Any interested person will have the opportunity to testify. Advance notice is not required. However, anyone who wants to make arrangements to testify may do so prior to the hearing by contacting the secretary of the Hazardous Waste Management Commission at (573) 751-2747.

Any person may submit written comments on this rule action. Written comments shall be sent to the director of the Hazardous Waste Program at PO Box 176, Jefferson City, MO 65102-0176. To be accepted, written comments must be postmarked by midnight on August 22, 2013. Faxed or emailed correspondence will not be accepted.

Please direct all inquiries to the Rules Coordinator of the Hazardous Waste Program, at 1738 E. Elm, Jefferson City, MO 65102, telephone (573) 751-3176.

#

COMMENTS

RECEIVED

From: Ronald J. Leone [<mailto:ron@mpca.org>]

Sent: Wednesday, August 21, 2013 8:13 AM

To: Lamb, David

Cc: PSTIF Office; DNRContact, mjordan@mail.wallisco.com; Wallis, Lynn; Andreasson, Rachel; McNutt, Don

Subject: RBCA Proposed Rule: Formal Comments

Mr. Lamb: The Missouri Petroleum Marketers & Convenience Store Association (MPCA) is a 400+ member statewide trade association located in Jefferson City which represents the majority of the convenience stores, gas stations, truck stops, petroleum marketers and their suppliers located all across Missouri. Many of these companies are small, second or third generation family owned businesses. It's not an exaggeration when we say that MPCA members literally and figuratively fuel Missouri's economy.

As you know, MPCA has been actively involved with the risk-based corrective action (RBCA) issue for more than 10 years. On behalf of MPCA's 400+ members, please accept this email as our formal comments regarding the RBCA rule changes detailed on pages 1160-1163 in the 7/15/13 Missouri Register.

MPCA fully supports and incorporates herein by reference both the written comments being submitted by Mark Jordan & Donnie Greenwalt with Wallis Companies and the 8/15/13 public testimony presented by the Petroleum Storage Tank Insurance Fund (PSTIF).

MPCA believes the proposed RBCA rule changes are for the most part necessary, reasonable & measured, and we ask that you seriously consider the comments and suggestions provided by both PSTIF and Wallis Companies.

Thanks to you and your staff for all of your hard work on this very important issue.

Best, Ron

Ronald J. Leone, Esq.

Executive Director

Missouri Petroleum Marketers & Convenience Store Association (MPCA)

205 East Capitol Avenue, Suite 200 • Jefferson City, MO 65101 | p: 573.635.7117, ext 16 | c: 573.864.5189

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www.PACEshow.com

From: Jordan, Mark [<mailto:MJordan@mail.wallisco.com>]
Sent: Tuesday, August 20, 2013 5:42 PM
To: Lamb, David
Cc: Leone, Ron; PSTIF Office
Subject: Proposed Changes To MRBCA Guidance Document

David,

First let me commend you on your efforts over these last many years in developing a broad consensus on a complex and difficult topic!

Second, please accept this email as my formal comment on the 2013 RBCA Guidance Document. Donnie Greenwalt will also be forwarding a letter via regular mail that will expand on the issue outlined below.

My sole comment relates to section 6.1.1.2. Determine Reasonably Anticipated Future Use. I would propose to substitute the delete the words "Interviews with current property owners" with the words "Information obtained from current property owners by the Consultant or the Responsible Party"

With that change, I think the document is masterful compromise.

Thank You,

Mark Jordan
VP Facilities
Phone/Fax: (636)549-1600

Received by Tim Chibnall, HWP, by email on August 16 at 9:50 a.m.

Tim,

One of the main reasons for revising the tanks MRBCA guidance was a desire to update its risk-based levels with the most current toxicological data and scientific methodology utilized by the EPA and other federal and state agencies. The result would be consistent target levels for Missouri's tanks and B/VCP programs that are in line with the most current information used throughout the country.

The proposed updates to the tanks guidance include revisions to the target levels so that they are consistent with the departmental target levels currently in use. However, we understand that a forthcoming update to the departmental guidance will further update its target levels. If the updates to the tanks guidance occur as currently scheduled, Missouri's guidance documents will contain consistent target levels for only a very brief period (a matter of months at most). Thereafter, the guidance documents will conflict with each other once again.

Acknowledging that the tanks guidance process has been delayed several times already, it seems prudent to delay it one more time so that both it and the departmental guidance can benefit from the latest toxicological and scientific methodology.

Brian

Please note my new office telephone number.

Brian Porter, PE

Principal

Department Manager | Environmental

Terracon

11600 Lilburn Park Road | St. Louis, Missouri 63146

P (314) 692 9114 | F (314) 692 8810 | M (314) 473 8529

brporter@terracon.com | www.terracon.com



August 20, 2013

Mr. David Lamb
Director, Hazardous Waste Program
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102-0176

RE: Proposed Changes to Missouri Risk-Based Corrective Actions

Dear Mr. Lamb:

As a representative of Wallis Companies (Wallis), I am pleased to provide this comment letter regarding the proposed changes to the Missouri Risk-Based Corrective Actions (RBCA) Rules and Guidance Document for underground storage tanks.

Overall, I have no major concerns with what the new rules or guidance document contain. I believe the DNR, PSTIF and MCPA put forth a great effort to collaborate and compromise on a streamlined document that will hopefully make the RBCA process less cumbersome and help facilitate site closures. While this latest version may not be perfect, it is clearly an improvement over what we had simply based on the consolidation and elimination of redundancy and useless requirements.

That being said, I do have a few comments on the requirements contained in Section 6.1.1.2 (Determination of Reasonably Anticipated Land Use (RAFU)) and, more importantly, the administration of this particular section by DNR project managers.

My comments center on the addition of interviews with current property owners as a factor for consideration when determining future land use in the absence of definitive, long-term development plans. It is not that I am strongly opposed to this addition, but rather I disagree with the disproportionate amount of weight given to this factor by project managers for several reasons. First, the future plans of the property owner are not the "end all" for future land use determination. While they are the property owner, often they are still subject to requirements of planning and zoning and other local regulations or deed restrictions that might dictate what their property can and cannot be used for. Second, in an ideal situation, all adjacent property owners would be educated on petroleum remediation projects and receptive to the risk-based corrective actions process without seeing an opportunity for personal gain. However, this is rarely the case. Similar to obtaining access agreements, I have personally encountered attempts at extortion from adjacent property owners when trying to

document future land use. Furthermore is the ever-present potential for frivolous litigation when no legitimate risk to human health or the environment is present. It is also often the case that a document signed by the property owner or a verbal interview conducted with the owner is not an enforceable, legal instrument should land use trends change in the future. Again, let me reiterate—I am not opposed to this addition and I believe it should be considered when available. However, I also believe all other factors indicating the most *reasonably* anticipated future use should be considered with increased weight in the absence of a current owner interview.

Lastly, although the new guidance document has not been accepted by the Hazardous Waste Commission, it should be noted that some project managers have been requiring (not simply requesting) this information for some time now. I agree that the decision of future land use should be made by the DNR based on the available information and good professional judgment; however, I believe more value should be given to the information that is presented by consultants. The consultants that work on behalf of owners are also certified professionals and DNR should understand that they all have costs and risks associated with reports they sign and the information and conclusions contained therein. In several instances that I can think of, the DNR project manager(s) have muddled the issue of future land use with their own subjectivity. Specifically on one example, the overwhelmingly strong weight of evidence documentation presented to justify non-residential RAFU did not satisfy the particular project manager for an off-site Waffle House. The project manager decided to contact the Waffle House directly and inquire as to the future plans of the property. In this instance, the manager of the Waffle House was interviewed and indicated non-residential future use. Ultimately, the right decision was made and non-residential land use was agreed to by DNR and our consultant; however, not only was this an inappropriate method for evaluating our consultant's information, it is alarming that the project manager put more trust and value into the information provided by the Waffle House manager than our professional consultant.

In my opinion, the "risk" in risk based corrective actions not only refers to the risks evaluated relative to human health and the environment but it also refers to the risk involved in making the best, most educated decisions about the future based on the knowledge and factual information we have in the present rather than speculation and "what ifs".

Thank you for your time and consideration in this matter.

Sincerely,



Donnie Greenwalt
Environmental Compliance Manager
Wallis Companies

Testimony by Carol R. Eighmey, Executive Director, MO PSTIF
Public Hearing on Proposed Amendments to 10 CSR 26-2.062, 2.078 and 2.082
August 15, 2013

Good morning. My name is Carol Eighmey; I serve as the Executive Director of Missouri's Petroleum Storage Tank Insurance Fund.

I appear today on behalf of the 3600 participants in Missouri's PSTIF who currently own/operate >10,000 tank systems where fuel is stored. The majority of Trust Fund participants are small business owners; others include cities, counties, schools, hospitals, and the like. And while the number of leaks occurring from these facilities is tiny – fewer than 20 per year – a leak event can seriously disrupt their business to the extent that it destroys livelihoods. We work hard to try and prevent that from happening.

In addition, I speak today on behalf of hundreds of other property owners who are not in the fuel business but, for various reasons, are cleaning up properties that were contaminated in years gone by, before current operating regulations were in place. A majority of these persons are *not* legally liable for the pollution on their properties – rather, they are *voluntarily* cleaning it up so the properties can be redeveloped and can *contribute* to the economic health of their neighborhoods and communities, rather than detracting from it. These Missourians have no other “voice” – they are not members of any trade association, they have no lobbyists. They include widows, children, grandchildren, and purchasers of these properties, and the costs they incur to meet your requirements are borne by all Missourians. It is our fiduciary duty to look out for their interests.

On behalf of these two groups of citizens, I am pleased to offer the following comments:

1) Your current rules require persons who have a leak – or who are cleaning up “legacy pollution” from old tank systems – to comply with requirements contained in seven different documents totaling ~400 pages. This is a cumbersome and difficult task.

Today, you are considering changes that will streamline your requirements into a single guidance document, which will be <200 pages. Much duplicative, inconsistent, or erroneous language in the seven documents has been eliminated or corrected. This alone makes this rulemaking a worthwhile endeavor.

2) In addition, your proposed rulemaking eliminates a requirement to use standardized forms in various reports – also a huge improvement. Nine years ago, the consultant who helped DNR write the 2004 Guidance Document believed that standardized forms were a good thing – and he created several dozen of them. What we all painfully discovered was that the forms are like an appendix in a human being – they may occasionally serve some obscure purpose, but most people function just fine without them! The requirement to use these standardized forms is now clearly

obsolete; some of them are no longer even accurate. Our claimants, however, continue to pay their consultants to fill out these forms and attach them – as an unnecessary appendage – to their reports; then the PSTIF, of course, has to reimburse those costs. So we look forward to the elimination of this requirement.

3) Third, I would note that the proposed rulemaking *does* do impose some new requirements and change some of your numerical cleanup standards. We have reviewed these proposed changes and – while we’re not fans of all of them, and some of them will increase costs – we nevertheless believe they are reasonable and can be implemented without *unduly* increasing costs.

4) In the last few months, a question arose as to how the Department should administer your requirements at active, operating tank facilities. Specifically, if residual impact remains in areas of the property where petroleum equipment exists, and where employees of petroleum equipment companies may be working, how must one assess exposure risks for those portions of the property?

To clarify this, your staff recently issued a memo, which is attached to my testimony. Today, we are requesting that these clarifications be incorporated into the 2013 Guidance Document; a suggestion on how this might be done is included in the attachment to my testimony.

5) In addition, our staff has identified a few minor and non-substantive corrections we would like to suggest be made in the 2013 Guidance Document. I’ll not go through these today; they are attached, and we ask that you receive them as part of our formal comments.

In closing, I would like to thank DNR Director Sara Parker Pauley, along with Aaron Schmidt and Tim Chibnall of her staff, and Dan Henry of my staff, for the very detailed and diligent work they did last winter, sifting through thousands of words, numbers, charts and pages to craft these amendments. As you can imagine, it took a lot of “sweat and blood.” But what has been accomplished – while it undoubtedly falls short of perfect – is a *significant and substantial* step forward, and one that is long overdue.

On behalf of all our Trust Fund participants, and all our claimants, I thank you for the opportunity to testify today and I urge you to adopt these recommended changes to your requirements.

Comments on DNR's Proposed Amendments to the Tanks RBCA Guidance Document
(Listed by section or section number)

- 1.1 – First paragraph accurately refers to the 2004 document as “draft guidance.” Suggest first sentence in second paragraph be revised as follows: “In 2005, the process provided for by the **draft** guidance was modified...”
- 2.1 – Second sentence refers to Section 1.3 of the Guidance Document, which will no longer exist. Suggest deleting the phrase, “...as discussed at Section 1.3 of this document...”
- 2.2.1 – Suggest renaming title of subsection, “**Release Discovery**” instead of “Site Discovery,” to be consistent with other language in the Guidance.
- 2.4 – Suggest revising fourth sentence as follows, “Such communication must occur throughout the MRBCA process, from **release** discovery to issuance...,” to be consistent with other language in the Guidance.
- 3.1 – Suggest revising first sentence of second paragraph as follows: “...may ultimately lead to **site-discovery of a release.**”
- 4.4.1 – Since an explicit list of required photographs is being added, suggest deleting the previous, less-precise sentence toward the end of the section that says, “During the tank closure process, sufficient color photographs shall be collected to document the condition of tanks, excavation, pads, etc. and submitted with the closure report.”
- 4.5.8 – Suggest revising to more accurately describe current practices, as follows: “If treatment will be via on-site landfarming, **approval must be obtained from MDNR’s Tanks Section as part of the Corrective Action Plan for the petroleum release. Off-site landfarms require a permit issued by MDNR’s Water Protection Program; for information concerning landfarm permits, contact MDNR’s WPP at ...**”
- 5.1 – Suggest revising the last item in the third bulleted list to be consistent with change to terminology made throughout the document, as follows: “Information about corrective action measures ~~or risk management activities~~ that have been conducted and are planned.”
- Similarly, suggest revising the next sentence, as follow: “...beyond that discussed herein might be required to develop a **Corrective Action Plan** or to complete a Tier3...”
- 5.2 – The first paragraph appears to have been written in 2004 to help owners and their consultants understand how to transition to the new MRBCA Guidance; it is largely obsolete today and – as a summary of the RBCA process – discusses in a general way the tasks that are more specifically presented throughout the document. Suggest deleting the entire paragraph.

5.4.5 – The second paragraph references MEGA, a compilation of data that is now obsolete. Suggest revising as follows: “Two valuable sources of regional hydrogeology and aquifer characteristic information are the Well Information System, which contains all records of known wells in Missouri and is available at <http://dnr.mo.gov/mowells/publicLanding.do>, and “CARES” maps, available at <http://ims.missouri.edu/moims/step1.aoi/countylist.asp>.”

5.6.4 – The last paragraph of the new text advises the reader to “refer to Subsection 5.8 for developing a sampling plan for VWC.” However, though Subsection 5.8 contains helpful information for designing one’s sampling plan, it is not specific to VWC. Suggest deleting the words, “for VWC” from the text in 5.6.4.

5.9.1 – This subsection conflicts with information contained in Subsection 6.3.3 regarding POD and POE. Suggest it be revised accordingly.

Table 5-1 – The Department accepts Lab Method 3511 for TPH-DRO, as long as the lab meets the same detection limits and QA/QC requirements as for other methods. Suggest this method needs to be added to Table 5-1 as an option for TPH-DRO.

6.1.2.1 – Suggest insertion of a sentence at the end of this subsection, as follows: “Because petroleum equipment companies are subject to other regulatory requirements regarding worker exposure, it is not necessary to evaluate dermal contact risk associated with soil or groundwater exposures in the areas of the property where tanks/piping are located.”

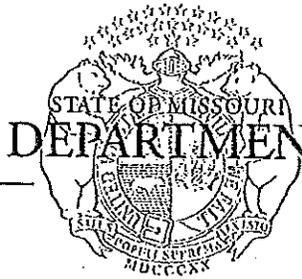
6.1.3.1 – We suggest inserting one sentence at the end of this subsection, as follows: “At an active tank facility, the exposure model can assume no building will be constructed over the tank pit or where the dispensers are located.”

7.5 – Suggest revising the third paragraph, as follows: “Depending on this distance and the depth to groundwater...,” so the text will match the terminology used in Table 7-4.

Introduction to Section 9 – The new text added just prior to Subsection 9.1 references “light non-aqueous phase liquid” and “LNAPL” in several places. Should this paragraph use the term “free product” instead?

10.1 – The second bulleted list contains two references to “LNAPL” in two places; suggest the first reference should be deleted and the second changed to “free product.”

Appendix C – The numbering of the footnotes may need to be corrected.



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

MEMORANDUM

RECEIVED

JUL 11 2013

BY PSTIF

DATE: JUL 03 2013

TO: Ken Koon, Chief
Tanks Section
Hazardous Waste Program

FROM: Aaron Schmidt, Deputy Director
Division of Environmental Quality

SUBJECT: Exclusion of Exposure Pathways Relative to an Active Underground Storage Tank Pit

For the purposes of this memo, the term "tank pit" is defined as one or more currently operating underground storage tanks (USTs) and the granular fill material immediately surrounding the operating USTs.

When evaluating the indoor inhalation of vapors exposure pathways for soil and groundwater for a future residential or non-residential land use scenario, the tank pit needs not be included in the evaluation. All areas outside of the tank pit shall be included in the evaluation.

When evaluating the construction worker dermal contact with soil and groundwater exposure pathways, contamination within the tank pit, whether free product or dissolved phase contamination, need not be included in the evaluation. The evaluator shall assume that construction workers working in an active tank pit are knowledgeable of the possibility for petroleum contamination to be present and such exposures will be prevented via the use of personal protective equipment by the workers.

All other exposure pathways, receptors and exposure domains shall be evaluated.

AS: lls

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 4

Rulemaking Update

Recommended Action:

Information Only

Presented by:

Tim Eiken, Rules Coordinator, HWP

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 5

HB1251 – Rule Reviews – Report to the Commission

Issue:

The 2012 legislative session saw the passage of HB 1251, referred to as the “No Stricter Than” legislation; which, with a few exceptions, stated that the Hazardous Waste Management Commission shall not promulgate rules stricter than the EPA in certain specified areas. This legislation was signed in to law on July 10, 2012, and became effective on August 28, 2012. In addition to limits on future rules being no stricter than EPA, the legislation required the Department to also identify existing hazardous waste rules that are inconsistent and file amendments to repeal or amend.

Through the Hazardous Waste Forum, the Department has been reviewing affected rules in Chapters 3, 4, 5, and 7. The Hazardous Waste Forum includes Department staff and hazardous waste stakeholders, consisting of environmental health and safety staff from laboratories, universities, permitted facilities, hazardous waste transporters and retailers.

The Department has prepared a document that identifies those regulations in the affected chapters that are inconsistent with the statute and consequently must be repealed or amended. This document is included in a report that also contains information about the review process and the documents prepared as part of the process. This document will form the basis of a future rulemaking to address the rules that are inconsistent. The rulemaking will also include other revisions determined to be necessary.

Recommended Action:

Information Only.

Presented by:

Tim Eiken, Rules Coordinator, HWP

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 6

2012 Annual Drycleaning Environmental Response Trust Fund Report

Issue:

Presentation of the 2012 Annual Drycleaner Emergency Response Trust Fund report.

Recommended Action:

Information Only.

Presented by:

Scott Huckstep – Brownfield Voluntary Cleanup Program, HWP

DEERT FUND

DRY CLEANING ENVIRONMENTAL RESPONSE TRUST

2012 ANNUAL REPORT



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



HISTORY

In 2000, Senate Bill 577 established the Drycleaning Environmental Response Trust Fund, or DERT Fund, and Section 260.960, Revised Statutes of Missouri, or RSMo, authorized it. The DERT Fund, provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from dry cleaning facilities. The DERT Fund is a state fund and is administered by the Missouri Department of Natural Resources' Hazardous Waste Program according to rules published by the Hazardous Waste Management Commission. The laws and regulations governing the DERT Fund are found in Sections 260.900 to 260.965 RSMo and 10 Code of State Regulations 25-170.010 to 10 CSR 25-17.170 respectively. In 2011, Senate Bill 135 extended the expiration date of the DERT Fund from Aug. 28, 2012 to Aug. 28, 2017.

Operators of active dry cleaning facilities are required to register with the Missouri Department of Natural Resources, as outlined in Section 260.915 RSMo. Each active and operating dry cleaning facility is required to pay an annual registration surcharge based upon the number of gallons of chlorinated solvents used during the calendar year, as outlined in Section 260.935 RSMo. This includes coin-operated dry cleaning facilities. Laundry facilities located in prisons, government entities, hotels, motels and industrial laundries are specifically exempt from the requirements of this statute. All solvent suppliers that sell or provide chlorinated solvents to a dry cleaning facility are required to pay the solvent surcharge fees to the department.

Section 260.955 RSMo, requires the department to provide an annual report to the General Assembly and the governor regarding:

- Receipts of the fund during the preceding calendar year and the sources of the receipts.
- Disbursements from the fund during the preceding calendar year and the purposes of those disbursements.
- The extent of corrective action taken during the preceding calendar year.
- The prioritization of the sites for expenditures from the fund.

DISBURSEMENTS FROM THE DERT FUND

Expenditures from the fund are used to:

1. Reimburse participants for the costs of addressing releases of chlorinated solvents from dry cleaning facilities. Participants are liable for the first \$25,000 of eligible cleanup related costs as a deductible.
2. Administer the program by collecting the surcharges and guiding and assisting the cleanup activities.

Table 1 describes the expenditures from the fund, which were prohibited until, on or after July 1, 2002, by Section 260.925 RSMo. Reimbursements for eligible environmental cleanup costs were not made until the regulations went into effect on May 30, 2006.

TABLE 1 - EXPENDITURES OF THE DERT FUND

Calendar Year ⁽¹⁾	Salaries & Wages	Expense & Equipment	Fringe, etc. ⁽⁴⁾	Reimbursements ⁽⁵⁾	Total Costs
2000 ⁽²⁾	\$0	\$0	\$0	\$0	\$0
2001 ⁽²⁾	\$0	\$0	\$0	\$0	\$0
2002 ⁽²⁾	\$1,163	\$0	\$2,350 ⁽³⁾	\$0	\$3,513
2003	\$77,271	\$14,995	\$35,655	\$0	\$127,921
2004	\$106,083	\$59,642	\$73,437	\$0	\$239,162
2005	\$99,583	\$63,909	\$92,528	\$0	\$256,020
2006	\$187,488	\$145,789	\$140,850	\$176,031	\$650,158
2007	\$186,019	\$64,858	\$155,026	\$258,785	\$664,688
2008	\$192,387	\$25,814	\$171,884	\$140,000	\$530,085
2009	\$183,108	\$9,316	\$200,064	\$456,733	\$849,221
2010	\$178,337	\$8,450	\$172,540	\$303,651	\$662,978
2011	\$137,229	\$8,210	\$143,355	\$284,689	\$573,483
2012	\$104,777	\$4,086	\$158,751	\$495,468	\$763,082
Totals	\$1,453,445	\$405,069	\$1,346,440	\$2,115,357	\$5,320,311

⁽¹⁾ Source: SAM II Data Warehouse Information.

⁽²⁾ RSMo, Section 260.925 prohibited expenditures from the DERT Fund until on or after July 1, 2002.

⁽³⁾ House Bill 1115, Section 15.220, RSMo, authorized a transfer of \$1,289 out of the State treasury on May 6, 2002, chargeable to various funds, such amounts as are necessary for allocation of costs to other funds in support of the state's central services, to the general revenue fund.

⁽⁴⁾ Fringe amount includes Old Age Survivors and Disability Program, retirement system, deferred comp, Missouri Consolidated Health Care Plan, Cost Allocation Plan (OA), Cost Allocation (DNR) State Office Bldg Maintenance and Repair, etc.

⁽⁵⁾ Reimbursements were not made until the regulations went into effect on May 30, 2006.

RECEIPTS TO THE DERT FUND

The Hazardous Waste Program is responsible for the collection of all applicable surcharges from dry cleaning facilities and solvent suppliers. There are two main sources of revenue for the fund. The first is a dry cleaning facility annual registration surcharge paid by owners and operators of dry cleaning facilities (\$500, \$1,000 or \$1,500 based on chlorinated solvent used during the calendar year). The second is a solvent surcharge paid by the solvent suppliers on a quarterly basis of \$8 per gallon of perchloroethylene, trichloroethylene and other chlorinated solvents sold.

TABLE 2 - 2012 DRY CLEANER FACILITY ANNUAL REGISTRATION SURCHARGE

Size of Facility	Facilities Registering by 5/1/13	Gallons of Solvent Used	Annual Registration Fee
Small	129	0 to 140	\$500
Medium	14	141 to 360	\$1,000
Large	1	>360	\$1,500

Table 3 describes the surcharge collections. The collection of the registration surcharges began on April 1, 2001. The collection of the solvent surcharge began with the April 1, 2001 to June 30, 2001 quarter.

TABLE 3 - RECEIPTS TO THE DERT FUND(1)

Calendar Year	Registration Surcharge	Solvent Surcharge	Interest & Penalties	Totals
2000	\$0	\$0	\$0	\$0
2001	\$221,500	\$170,208	\$5,995	\$397,703
2002	\$222,150	\$435,859	\$17,886	\$675,895
2003	\$303,126	\$427,880	\$26,892	\$757,898
2004	\$319,488	\$409,293	\$43,178	\$771,959
2005	\$234,150	\$367,598	\$73,595	\$675,433 ⁽²⁾
2006	\$204,993	\$308,678	\$121,077	\$635,248 ⁽³⁾
2007	\$185,371	\$259,175	\$138,931	\$583,477
2008	\$191,888	\$237,874	\$132,377	\$562,139
2009	\$154,991	\$182,459	\$54,143	\$391,598 ⁽⁴⁾
2010	\$135,573	\$173,448	\$28,387	\$337,408
2011	\$131,706	\$130,997	\$17,575	\$280,312 ⁽⁵⁾
2012	\$113,415	\$105,978	\$13,029	\$233,442 ⁽⁶⁾
Totals	\$2,418,351	\$3,209,447	\$673,065	\$6,302,512

⁽¹⁾ Source: SAM II Data Warehouse Information.

⁽²⁾ 2005 total includes a \$90 refund to the fund.

⁽³⁾ 2006 total includes a \$500 transfer in.

⁽⁴⁾ 2009 total includes a \$5 vendor refund to the fund.

⁽⁵⁾ 2011 total includes a \$34 overpayment.

⁽⁶⁾ 2012 total includes a \$1,020 transfer in.

PRIORITIZATION OF SITES FOR EXPENDITURES FROM THE FUND

10 CSR 25-17.140 allocates DERT Fund monies to prioritized sites in the following proportions: high priority sites: 60 percent; medium priority sites: 30 percent; low priority sites: 10 percent. In any fiscal year, if the funding allocation in any priority category is not used, those funds may be reallocated to other priority categories, starting with any high priority sites and followed by medium and then low priority sites.

Sites applying to the program must submit the results of one soil, groundwater or surface water sample that exhibits contamination of dry cleaner solvent excess of the department cleanup levels. The initial assessment will allow the department to determine the eligibility of the site in the fund. Some sites will provide enough information during the application process to receive a ranking score. Other sites will require additional information before a ranking score can be determined.

If the site has not provided enough information to have a ranking score determined, the department will direct the owner or operator to conduct the necessary assessments to determine a ranking score. The ranking score is based on such factors as environmental contamination, potential economics, potential receptors, risk-based cleanup parameters, site history, threat to drinking water sources, threat to off-site properties, etc. A copy of the prioritization form is available online at www.dnr.mo.gov/env/hwp/dert/hwpcp-dryclean.htm.

On May 30, 2006, the DERT Fund began accepting applications for enrollment into the fund for oversight and reimbursement of investigation and cleanup activities. By the end of 2012, the fund had received applications for 42 sites. Five of these sites received a certification of completion letter from the Brownfields/Voluntary Cleanup Program, or BVCP, and enrolled into the fund for reimbursement of eligible costs. Fourteen of the 42 sites transferred from the BVCP to the DERT Fund during 2006.

By the end of 2012, the DERT Fund had issued 11 Certificate of Completion letters and reimbursed \$2,115,357 in eligible costs to participants (See Table 1).

During calendar year 2012, a liability analysis was conducted for the DERT Fund. The department determined reimbursement of future costs for the investigation and remediation of contaminated dry cleaning sites may be limited or impossible. Reimbursement funds are not guaranteed for any work plans approved after Sept. 3, 2012 and the DERT Fund is not accepting any new applications for enrollment after this date. Notices regarding the DERT Fund status were mailed in September 2012 to participants and their consultants, the stakeholder group, and all active dry cleaners in Missouri that use chlorinated solvents.

TABLE 4 - DERT FUND SITES

Site Name and City	Priority			Amount Reimbursed	Comments
	High	Med.	Low		
AG Cleaners, Kirkwood			X		
Ambassador Cleaners, Ellisville			X		
American Cleaners, Ballwin		X			
American Cleaners-Dorsett Road, Maryland Heights			X	\$5,090	Completion Letter issued 5/21/09
American Cleaners - Fenton Plaza, Fenton		X		\$87,240	
American Cleaners - Mid Rivers Mall, St. Peters*		X		\$144,486	Reimbursements completed
American Cleaners - Natural Bridge, Bridgeton		X		\$12,264	Completion Letter issued 11/29/10
American Cleaners - Southroads, St. Louis		X		\$53,547	Completion Letter issued 6/11/09
American Cleaners, University City		X		\$7,132	
A to Z Auto Center - Crestwood			X		
Bright and Free Laundry & Dry Cleaners - St. Louis			X	\$13,060	
Busy Bee Laundry, Rolla	X			\$343,922	
Charter Dry Cleaning - Ellisville		X		\$5,078	
Clayton Cleaners, St. Louis	X			\$60,089	
Colonial Cleaners - Arsenal Street, St. Louis	X			\$30,400	
Colonial Cleaners - Brentwood Blvd., St. Louis	X				Completion Letter issued 7/2/08
Community Laundromat, Ava	X				Terminated by DERT
Cypress Village Shopping Center, St. Ann*		X		\$366,200	Reimbursements completed
Davis Cleaners, Columbia					
First Capitol Cleaners, St. Charles	X			\$14,871	
Foster's Cleaners, Blue Springs			X	\$17,353	Completion Letter issued 6/18/09
Frontenac Cleaners - West End, St. Louis		X			Completion Letter issued 5/14/08
Grandview Plaza, Grandview			X	\$3,095	
Kingshighway Retail Center, Sikeston		X		\$13,068	
Ma Ma Bessie's Cleaners, Columbia					
McDonald's State Line, Kansas City		X			Completion Letter issued 7/26/12
Mission River/Antioch Cleaners, Kansas City		X		\$10,070	
Paramount Cleaners, Florissant*		X		\$42,035	Reimbursements completed
Park Lane Cleaners, Chillicothe			X	\$15,584	
Plaza Ford Ideal Laundry & Dry Cleaners Inc., Kansas City	X			\$40,197	
Premier Dry Cleaners of KC, Kansas City			X	\$22,798	Completion Letter issued 9/22/11
Regal Cleaners, University City		X			
Shamrock Cleaners, Kansas City					
Stanford Saper Cleaners, Kansas City*			X		No claims yet
Staten Island Cleaners, Florissant	X			\$203,562	Completion Letter issued 2/30/08
Tri-States Service Company - Boonville Ave. Springfield	X			\$369,079	
Tri-States Service Company - East Trafficway, Springfield		X		\$157,476	

TABLE 4 - DERT FUND SITES, CONTINUED

Site Name and City	Priority			Amount Reimbursed	Comments
	High	Med.	Low		
U.S. Cleaners - St. Louis					
VIP Cleaners, St. Peters			X		Completion Letter issued 1/13/10
West Gate Cleaners, St. Louis		X			Completion Letter issued 10/19/07
Yorkshire Cleaners, Marlborough	X			\$70,309	
Zehrt Printing, St. Louis*		X		\$7,352	Reimbursements completed

*Reimbursement only, site received certification of completion letter from Brownfields/Voluntary Cleanup Program.

TABLE 5: CORRECTIVE ACTION CONDUCTED IN 2012

Site Name and City	Corrective Action Conducted
AG Cleaners, Kirkwood	Groundwater monitoring to determine plume stability
American Cleaners, Ballwin	Initial assessment to identify extent of soil and groundwater contamination
American Cleaners - Fenton Plaza, Fenton	Groundwater monitoring to determine plume stability
American Cleaners, University City	Groundwater monitoring; Remediation via multi-phase extraction and in-situ chemical injection
Bright and Free Laundry & Dry Cleaners, St. Louis	Conduct risk assessment
Busy Bee Laundry, Rolla	Groundwater monitoring; Remediation via multi-phase extraction
Charter Dry Cleaning, Ellisville	Groundwater monitoring to determine plume stability
Clayton Cleaners, St. Louis	Groundwater monitoring; Installation and sampling of additional monitoring wells
First Capitol Cleaners, St. Charles	Groundwater monitoring; Installation and sampling of additional monitoring wells
Grandview Plaza, Grandview	Groundwater monitoring
McDonalds State Line, Kansas City	Groundwater monitoring; Certification of Completion letter issued
Park Lane Cleaners, Chillicothe	Groundwater monitoring to determine plume stability
Regal Cleaners, University City	Groundwater monitoring
Tri-States Service Company - Boonville Ave., Springfield	Installation of additional monitoring wells; Additional soil and groundwater sampling to determine extent of contamination
Yorkshire Cleaners, Marlborough	Groundwater monitoring

COMPLIANCE WITH SURCHARGES

The two main sources of revenue for the fund are the dry cleaning facility annual registration surcharge and the solvent surcharge. State law requires owners and operators of dry cleaning facilities pay the annual registration and solvent suppliers to pay the solvent surcharge on quarterly basis.

When a facility or solvent supplier is not in compliance with the law, the DERT Fund uses the department's conference, conciliation and persuasion process to return them to compliance. In 2006, the department's Hazardous Waste Program began referring facilities and solvent suppliers that continued to fail compliance to the Attorney General's Office.

Active and abandoned dry cleaners that are eligible for the fund must be in compliance with all applicable environmental laws in order to receive funding for environmental cleanup. Consequently, it is in everyone's interest to assist businesses in returning to compliance with the law so they are covered by the fund.

On Sept. 1, 2008 the DERT Fund began notifying the registered solvent suppliers about the active dry cleaning facilities that have not paid their required registration surcharges. According to 10 CSR 25-17.030(2)(G) "a solvent supplier shall not provide dry cleaning solvents to an active dry cleaning facility that has not paid its annual dry cleaning facility registration surcharge."

A solvent supplier who knowingly supplies solvent to a dry cleaning facility that is not in compliance with payment of the surcharges will be in violation of the above regulation. The DERT Fund also posts a listing of these dry cleaning facilities on its webpage similar to that for solvent suppliers who do not pay the required solvent surcharges.

Table 6 indicates the compliance rate for annual dry cleaning facility registration surcharges. Failure to pay the registration surcharges represents approximately 90 percent of the violations that occur in the DERT Fund.

OUTREACH ACTIVITIES

The department has additional information, publications, forms and answers to questions about the fund available on the Web at www.dnr.mo.gov/env/hwp/dert/hwpcvp-dryclean.htm.

The department is a member of the State Coalition for the Remediation of Drycleaners. The coalition is comprised of states that have formal dry cleaner cleanup programs. EPA's Technology Innovation Office funds this coalition. The coalition conducts conference calls every other month and holds an annual meeting to discuss issues related to dry cleaner program administration and technical site investigation or cleanup topics. The coalition serves as an invaluable asset for Missouri as the department manages the fund and provides oversight of assessments and cleanup of dry cleaner sites.

TABLE 6 - DRY CLEANING FACILITY REGISTRATION COMPLIANCE

Calendar Year	No. of Active Facilities	Facilities Submitting Registration Form and Surcharges by 5/1/13	Percent Compliance with Annual Registration
2012	188	144	76.6

TABLE 7 - COMPLIANCE/ENFORCEMENT ISSUES WITH DRY CLEANING FACILITIES

Calendar Year	Issued an NOV	Referred to Compliance/ Enforcement	Referred to the AGO	Returned to Compliance
2012	20	14	4	133

TABLE 8 - SOLVENT SUPPLIERS QUARTERLY REPORTING COMPLIANCE

Calendar Year	No. of Active Suppliers	Suppliers Submitting Quarterly Reports and Surcharges on Time	Percent Compliance Quarterly Reporting
2012	11	9	82

TABLE 9 - COMPLIANCE/ENFORCEMENT ISSUES WITH SOLVENT SUPPLIERS

Calendar Year	Issued an NOV	Referred to Compliance/ Enforcement	Referred to the AGO	Returned to Compliance
2012	0	0	0	5

REFERENCES

State Program To Clean Up Drycleaners. Schmidt, Robin, R. DeZeeuw, L. Henning and D. Trippler. June 2001. State Coalition for Remediation of Drycleaners. www.drycleancoalition.org/survey/

Departmental Missouri Risk-Based Corrective Action Technical Guidance, Missouri Department of Natural Resources, April 2006. www.dnr.mo.gov/env/hwp/mrbca/mrbca.htm.

CONTACT INFORMATION

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MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

www.dnr.mo.gov

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 7

Risk Based Target Levels

Issue:

The Missouri Risk-Based Corrective Action (MRBCA) guidance document (non-tanks) was initially published in 2006. Since that time, the Environmental Protection Agency (EPA) has updated the toxicity data for a number of contaminants and made changes to the methodology for developing target levels for certain types of contaminants. The Hazardous Waste Program (HWP), in cooperation with the Missouri Department of Health and Senior Services, now proposes to update the MRBCA Tier 1 risk-based target levels (RBTLs) using the current toxicity data and methodology to ensure the RBTLs are protective, defensible, and consistent with the target levels developed by the EPA.

Information:

Information Only

Presented by:

Tim Chibnall, Director's Office, HWP

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 8

Legal Update

Issue:

Routine update to the Commission on legal issues, appeals, etc.

Information:

Information Only

Presented by:

Kara Valentine, Commission Counsel

Missouri Hazardous Waste Management Commission Meeting

October 17, 2013

Agenda Item # 9

Quarterly Report

Issue:

Presentation of the current Quarterly Report.

Recommended Action:

Information Only.

Presented by:

Dee Goss, Public Information Officer, Division of Environmental Quality

Hazardous Waste Management Commission Report

April through June 2013

Quarterly Report



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

Hazardous Waste Management Commissioners

Michael Foresman, Chair
Andrew Bracker, Vice Chair
James "Jamie" Frakes
Elizabeth Aull
Deron Sugg
Charles "Eddie" Adams

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

For more information

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

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

www.dnr.mo.gov/env/hwp/index.html

Phone: 573-751-3176

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



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

Program Update Letter from the Director

The end of this quarter marks the end of spring and the beginning of summer. This is always a busy time of year, as with better weather, staff ramp up their sampling and inspection efforts across the state. It also marks the end of the state fiscal year, which means our Budget and Planning staff are also very busy as they look to close out the 2013 fiscal year activities and begin preparing for the upcoming 2014 fiscal year.

This quarter also marks the end of the 2013 legislative session. This session produced legislation critical to the department with the passage of House Bills 28 and 650. These bills, both omnibus bills, contain fees extensions for the department's Air, Water, Land Reclamation and Hazardous Waste programs among other things. For the Hazardous Waste Program, these fees, which were extended for five years to Dec. 31, 2018, make up \$2 million of the program's annual budget. These funds also allow us to meet the match requirements for several of the federal grants that make up the rest of our budget. In addition to the provisions related to fees, these bills also provide the department with the authority to conduct a comprehensive review of the Hazardous Waste Program's fee structure. It also streamlines some of the requirements of the hazardous waste permitting process and adds a representative from the petroleum industry to the Hazardous Waste Management Commission. This new authority, and changes to our processes, will hopefully prove useful and productive as they are implemented.

Staff continue to work diligently to meet the requirements of House Bill 1251, the "No Stricter Than" legislation passed during last year's legislative session. Review of existing rules, to determine those that are inconsistent with federal regulations, is nearing completion and the program is looking forward to the next phase, the rulemaking process, that will amend or rescind those rules deemed inconsistent. Stakeholder meetings have been held every 60 to 90 days since House Bill 1251's passage and we will continue to work with stakeholders as this process moves forward.

This edition of the quarterly report includes several fiscal year end reports and milestones reached for our various sections. I hope you enjoy reading about all of the different things this program has accomplished in fiscal 2013.

Sincerely,



David J. Lamb

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Brownfields/Voluntary Cleanup Program

Certificates of Completion

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

Through 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.

The Brownfields/Voluntary Cleanup Program issued seven certificates of completion for various sites from April through June 2013. This brings the total number of certificates of completions to 693.

Crescent Feed Company – Springfield

The Crescent Feed Company Inc. site is located at 1022 and 1100 West Phelps St. in Springfield. This site was historically used as residential property from at least the 1940s until the time the feed mill operations began in the mid 1950s. This property has operated as Crescent Feed since at least 1957 at the 1100 address. The 1022 address was occupied by a tire equipment warehouse from at least the late 1950s through the late 1960s.

A Phase I site assessment was conducted in fall 2012 to identify any recognized environmental concerns that might be present as a result of the site’s previous use history. Based on the findings of the Phase I, a Phase II was conducted to further evaluate soil and groundwater impacts. Groundwater sampling was limited due to recent drought. Lab analysis of collected samples did not detect any chemicals of concern above the default target levels. The site qualifies for unrestricted residential use.

The department determined the site is safe for its intended use.

The Laurel Site – St. Louis

The Laurel site is located at 601 Washington Ave. in St. Louis. This 11-story, one block square department store building was built in 1900 on the former site of St. Louis Gas, Fuel and Power building. It was operated as a dry goods company and a Dillard’s department store from 1908 to 1988 by Stix, Baer and Fuller.

The former manufactured gas plant located at the site was given a status of “No Further Remedial Action Planned” by the Environmental Protection Agency in 1988, so no oversight for this issue was required or provided by the program. Asbestos containing materials and lead-based paint were identified in the building, as well as fluorescent light bulbs and ballasts and various remaining cleaning and maintenance wastes. These materials were removed in accordance with an approved remedial action plan, with the exception of some asbestos containing materials and lead based paint, which were encapsulated in place. An operations and maintenance plan to manage and prevent future exposure to the encapsulated asbestos containing materials and lead based paint was approved by the program and filed in the property’s chain of title. The department determined the site is safe for its intended use. The building will be developed as a mix of residential and commercial use.

The Former Art Mint Limited Site – Kirkwood

The former Art Mint Limited site, located at 236 E. Monroe in Kirkwood, is on the northeast corner of a property currently used by Kirkwood Public Works department. Gateway Hose and Coupling Co., an asbestos firehose manufacturer, once occupied the property. In 2002, the city of Kirkwood purchased the property and a subsurface investigation revealed the presence of asbestos in the soil. The city intends to convert the site into a paved parking area for Kirkwood Public Work's equipment and vehicles.

Metals and chlorinated solvents, at levels slightly above the department's default target levels, are present in the groundwater at the site. However, after four quarters of monitoring, these levels have remained consistent and the contamination plume has been determined to be stable.

All asbestos removal at the site was performed without the oversight of the program. As such, any asbestos that may remain in the soil at the site is excluded from this certificate of completion. The department determined the site is safe for its intended use.

Agraform Facility – St. Louis

The Agraform Facility site is located at 133 East Krauss St. in St. Louis. This site is comprised of two portions - the undeveloped southern portion of the site (sold to Missouri Marine LLC) and the northern operating portion that houses the facility and includes three main buildings, two office trailers, smaller outbuildings and a primary tank farm area. The Agraform Facility has been developed residentially, commercially and industrially since at least 1916. Based on historical fire insurance maps and street directories, the site has been occupied by a foundry, the Heatmaster Furnace Oil Company, Union Carbide Chemicals Company, Rhone Poulenc Agriculture, The Columbia Southern Chemical Corporation and Bayer Crop Science. Known contaminants at the site include metals, polycyclic aromatic hydrocarbons and diesel range organics.

Investigations were conducted of groundwater, surface soil and subsurface soil. Levels of lead, polynuclear aromatic hydrocarbons and total petroleum hydrocarbons in the diesel and oil range were found in excess of risk-based target levels. A risk assessment in accordance with the 2006 Missouri Risk-Based Corrective Action, or MRBCA, guidance was conducted. Levels of lead, diesel range organics, total petroleum hydrocarbons and benzo(a)pyrene exceed the standards for residential use and lead exceeds the construction worker risk-based target levels in subsurface soils. An environmental covenant was placed on the site, restricting use of the site to non-residential purposes and putting a soil management plan in place to govern construction activities. The department determined the site is safe for its intended use. The site will continue as a pesticide packaging facility.

Missouri Marine – St. Louis

The Missouri Marine site, located on a yet unnumbered section of Quincy Street in St. Louis was originally the southern portion of the above mentioned Agraform Facility site. Known contaminants at the site include metals and polycyclic aromatic hydrocarbons.

Investigations were conducted of groundwater, surface soil and subsurface soil. Levels of lead and polynuclear aromatic hydrocarbons were found at the site in excess of risk-based target levels. A risk assessment in accordance with the 2006 MRBCA guidance was conducted. Levels of lead and benzo(a)pyrene exceed the standards for residential use and lead exceeds the construction worker risk-based target levels in subsurface soils. An environmental covenant was placed on the site, restricting use of the site to non-residential purposes and putting a soil management plan in place to govern construction activities. The department determined the site is safe for its intended use.

Cargill Tier II Properties - Kansas City

The Cargill Tier II Properties - Kansas City site located at 2306 Rochester St. in Kansas City initially consisted of nine properties immediately west of the Cargill Plant in Kansas City. The properties have been primarily used as salvage yards or residential property. Major contaminants include metals, polycyclic aromatic hydrocarbons and petroleum products. At a later point, three more properties were added to the site, bringing the total to 12 properties. These properties were also used as salvage yards and residences.

Groundwater, surface soil and subsurface soil were sampled at the site for volatile and semi-volatile organic compounds, polycyclic aromatic hydrocarbons, total petroleum hydrocarbons and metals. Metals and polycyclic aromatic hydrocarbons were detected in surface and subsurface soil above default target levels. Volatile organic compounds and polycyclic aromatic hydrocarbons were detected in groundwater above default target levels. A Tier I risk assessment was performed and several metals and polycyclic aromatic hydrocarbons in soil were shown to be above MRBCA residential standards, however, they did not exceed non-residential standards. An environmental covenant will be put in place restricting the property to non-residential use and prohibiting the use of groundwater for domestic purposes. The department determined the site is safe for its intended use.

Sites in Brownfields/Voluntary Cleanup Program

	Active	Completed	Total
April	240	688	928
May	236	692	928
June	236	693	929

New Sites Received

April

- Family Dollar Store Property - Kingshighway, St. Louis
- Family Dollar Store Property - Natural Bridge, St. Louis
- TR Gaines Technical Building, Warrensburg

May

June

- Arvest Bank, Lebanon
- Roehrig Auto (Former), St. Louis
- Chesterfield Auto Repair (Former), Chesterfield

Sites Closed

April

- Modern Distributing - Former, Springfield
- Crescent Feed Company Inc, Springfield

May

- Laurel (The), St. Louis
- Agraform Facility, St. Louis
- Missouri Marine, St. Louis
- Art Mint Limited (former), Kirkwood

June

- Cargill Tier II Properties - Kansas City

Drycleaning Environmental Response Trust Fund

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

Registrations

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

Calendar Year 2012	Active Dry Cleaning Facilities	Facilities Paid	Facilities in Compliance
Jan. - March 2013	189	71	37.57%
April - June 2013	188	159	84.57%

Calendar Year 2013	Active Solvent Suppliers	Facilities Paid	Suppliers in Compliance
Jan. - March 2013	11	8	72.73%
April - June	12	11	91.7%

Cleanup Oversight

Calendar Year 2013	Active	Completed	Total
Jan. - March 2013	25	11	36
April - June 2013	23	13	36

New Sites Received

April

May

June

Sites Closed

April

Fenton Plaza 48, Fenton
Charter Dry Cleaning, Ellisville

May

June

Reimbursement Claims

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

	Received	Under Review	Paid/Processed
April	1	9	5
May	5	5	1
June	1	5	0

	Received	Under Review	Paid/Processed
April	\$20,183	\$142,128.94	\$102,428.54
May	\$25,227.55	\$99,439.02	\$325
June	\$3,297.50	\$26,766.18	\$0

Reimbursement Claims Processed:

Site Name	Location	Paid
Antioch One Hour Cleaners	Kansas City	\$34,940.21
Charter Dry Cleaning	Ellisville	\$5,333.50
Grandview Plaza	Grandview	\$624.17
Kings Highway Retail Property	Sikeston	\$31,430.45
Regal Cleaners	University City	\$325
Tri State Service Co - E. Trafficway Site	Springfield	\$30,100.21

Total reimbursements as of June 30, 2013: \$2,235,959.50

DERT Fund Balance as of June 30, 2013: \$895,615.06

Inspections and Assistance

Regional Office Hazardous Waste Compliance Efforts

- Conducted 143 hazardous waste generator compliance inspections:
 - 44 at large quantity generators.
 - 61 at small quantity generators.
 - 31 at conditionally exempt small quantity generators.
 - Three at e-waste recycling facilities.
 - Three resource recovery inspection.
 - One targeted re-inspection.
- Conducted 12 compliance assistance visits at hazardous waste generators.
- Issued 61 letters of warning and three notices of violation requiring actions to correct violations cited during the 143 inspections conducted.
- Received and investigated a total of 66 citizen concerns.

Underground Storage Tank Compliance and Technology Unit

The department is currently working to enact the final underground storage tank, or UST, requirements of the Energy Policy Act of 2005. Underground Storage Tank Compliance and Technology Unit, or CTU, staff are working to develop new regulations requiring all new UST systems installed after July 1, 2017, to be double-walled. The new regulations will also include Missouri specific improvements, as well as the federal regulation changes, which are expected to be published this winter. Staff have already begun outreach efforts through the Missouri Petroleum Storage Tank Insurance Fund, or PSTIF, and the Missouri Petroleum Marketers and Convenience Store Association. This winter, staff is planning to bring additional outreach efforts to several areas of the state.

Tank Inspection Efforts

The department has long recognized the importance of compliance inspections to assure USTs are correctly installed, operated and maintained. Inspections can help detect problems early and prevent costly spills, leaks and releases. Inspections promote practices helping extend an UST system's use and compliance with regulations to better protect the environment and especially groundwater. The federal government established a minimum three year inspection cycle in the Federal Energy Policy Act of 2005. To meet this goal, the department and the Petroleum Storage Tank Insurance Fund entered into a contract with an inspection contractor for on-site inspections. Department staff reviews the inspection reports and communicates with the tank owner and operator about actions needed to comply with the UST regulations. At the start of each state fiscal year, a list of approximately 1,000 facilities is put together and given to the contractor for inspection in that year. As of Jan. 9, 2013, all of the facilities assigned to the contractor for State fiscal 2013 were inspected. Department UST inspectors continue to inspect all new tank installations, operating facilities not insured by PSTIF and out of use tanks. All of these efforts assure Missouri stays in compliance with the inspection mandates of the Federal Energy Policy Act.

Enforcement Efforts

During April through June 2013, staff completed three settlement agreements for UST enforcement with financial responsibility violations. Using the expedited enforcement process approved by the Hazardous Waste Management Commission in 2008, UST Compliance and Technology Unit staff and the Attorney General's Office continue to keep the number of facilities without a verified financial responsibility mechanism to less than 30.

New Staff

The UST Compliance and Technology Unit is now fully staffed with the addition of two individuals who will be great assets to the unit and the regulated community.

Dan Knaebel joined this unit in May, filling our vacant inspector position. He came to us from the Division of Energy. Dan is busy learning the technical and regulatory aspects of the job. Dan is quickly learning the major elements of being an inspector and is enjoying the extensive travel required.

Coy King joined this unit in June, filling the vacant case manager position. Coy's duties include reviewing inspections, enforcement case work and conducting field work as necessary. Coy is quickly learning how to evaluate the inspections he is reviewing for compliance and how to apply the regulations.

The UST Compliance and Technology Unit is now fully staffed with the addition of these two individuals who will be great assets to the unit and the regulated community.

Special Facilities Unit

Commercial Facility Inspectors

Special facilities inspectors conducted 11 inspections of commercial hazardous waste treatment/storage/disposal facilities, three of which resulted in the issuance of notices of violation.

Polychlorinated Biphenyl Inspector

The inspector conducted 20 compliance inspections at various types of facilities throughout the state. The inspector's reports are forwarded to the U.S. EPA Region 7 office, which has authority for taking any necessary enforcement action regarding polychlorinated biphenyls according to the Toxic Substances Control Act.

Hazardous Waste Transporter Inspector

The inspector conducted 41 commercial vehicle inspections, resulting in 22 violations cited and four vehicles placed out of service. As part of the Commercial Vehicle Safety Association's protocol, the department sends the inspection reports to the Missouri State Highway Patrol. The transporter must certify to the patrol the violations were corrected.

The inspector sent 13 letters to companies that were inactive, unregistered or conditionally exempt small quantity generators that shipped either small or large quantities of hazardous waste. These facilities are required to register as generators with the department. Two notices of violation were issued to unlicensed transporters. The inspector conducted one compliance assistance visit at a used oil transporter facility.

As of June 30, 2013, there were 255 licensed hazardous waste transporters in Missouri.

Hazardous Waste Enforcement Unit

Enforcement Efforts

- Resolved and closed five hazardous waste enforcement cases.
- Finalized one settlement agreement.
- Referred one facility to the Attorney General's Office.
- Received six new enforcement cases.
- Sent two penalty negotiation letters.

Savvis Communication Corporation Inc.

Savvis Communication Corporation Inc. is a warehouse leasing company in St. Louis.

The facility failed to:

- Determine if waste was hazardous.
- Have documentation that cathode ray tubes, or CRTs, meet the exclusion.
- Use authorized hazardous waste treatment, storage or disposal facility, or TSDF.
- Obtain a permit to operate as a TSDF.
- Ensure materials were not speculatively accumulated.
- Demonstrate legitimate recycling.
- Label used, broken CRTs "Used Cathode Ray Tube(s)-Contains Leaded Glass" or "Leaded Glass from Televisions or Computers;" or label used, broken CRTs "Do Not Mix with Other Glass Materials."

As a result of the department's actions, the facility removed thousands of pounds of abandoned hazardous waste from its facility. The person who abandoned the hazardous waste pleaded guilty in federal court and was sentenced to a fine of \$2.5 million and 30 months in prison. The facility developed and implemented a new and much more extensive recycling and disposal program for hazardous waste management within the entire company.

The final penalty assessed is \$15,490, to be paid to the St. Louis County School Fund.

The actions taken by the company will result in protection of the environment and adjoining property and persons and safer working conditions for tenants.

New Staff

Nicole Eby joined the Hazardous Waste Enforcement Unit in May as the new unit chief. She joins us after eight years of doing compliance and enforcement work with the Air Pollution Control Program and is busy learning the many responsibilities of her new position including filling a final vacancy within the unit, becoming familiar with the hazardous waste regulations and getting to know her staff.

Joy Johnson also joined the Hazardous Waste Enforcement Unit in May. She comes to us from the Water Protection Program. As an Environmental Specialist III, she is busy learning the enforcement process and the hazardous waste regulations and is assisting with development and organization of some of the unit's checklists and procedures.

In addition to these new arrivals, Evan Bryant was chosen to fill the vacant Environmental Specialist IV position within the unit in May. In his new role, Evan will be responsible for many of the more complex enforcement issues within the program as well as taking over many other responsibilities such as section training coordination, clandestine drug laboratory waste disposal and collection station authorization and participation in several technical and rulemaking issues.

Federal Consent Agreement and Final Order with Wal-Mart

On May 28, 2013, EPA and Wal-Mart Stores Inc. entered into a consent agreement and final order to resolve civil violations of the Resource Conservation and Recovery Act and Federal Insecticide, Fungicide and Rodenticide Act, or FIFRA. The civil settlement requires Wal-Mart to continue to implement and develop the corporate-wide hazardous waste management program employed in 2006 and pay a penalty of \$7.628 million.

On May 28, 2013, Wal-Mart also entered guilty pleas for six counts of violating the Clean Water Act in cases filed by federal prosecutors in Los Angeles and San Francisco and violating FIFRA in a case filed by federal prosecutors in Kansas City. The California criminal cases resulted in a \$40 million dollar fine, half of which will fund various community service projects. These projects include opening a \$6 million retail compliance assistance center that will help retail stores across the nation learn how to properly handle hazardous waste. The Missouri case resulted in criminal fine of \$11 million and an additional \$3 million to the department's Hazardous Waste Program to fund a supplemental environmental project. The project is detailed in the plea - to implement a program of education about pesticide regulations for regulators, the regulated and the public and for related inspection and enforcement efforts.

- In total, Wal-Mart will pay \$81.6 million for unlawful conduct as a result of the three criminal cases brought by the Justice Department and the civil case filed by EPA.
- The violations pertained to mismanagement of hazardous waste at Wal-Mart stores across the country and mismanagement of damaged pesticide containers by Wal-Mart and its contractor, Greenleaf LLC, at the Greenleaf facilities in Neosho and Pineville.

The department and the Attorney General previously entered into an agreement with Wal-Mart, in March 2012, to resolve violations at the Neosho and Pineville facilities. The agreement included a civil penalty of \$214,378 to the Newton County School Fund, cost recovery in the amount of \$4,082 for the department's oversight, cleanup expenses, unpaid generator fees and a supplemental environmental project for \$1,050,000 to sponsor pesticide collection events in rural Missouri. With previous civil actions brought by California and Missouri, Wal-Mart will pay a combined total of more than \$110 million to resolve these cases. Wal-Mart indicated the cost of cleanup at the Neosho and Pineville sites was in excess of \$3.4 million.

Greenleaf LLC was also convicted of FIFRA violations in November 2008 which resulted in a criminal penalty of \$200,000.

Missouri Pesticide Collection Program Update

Beginning on June 9, 2012, and ending on June 29, 2013, the department's Hazardous Waste Program and Environmental Services Program staff oversaw the Missouri Pesticide Collection Program. The program was a part of a supplemental environmental project funded by Wal-Mart in settlement of a hazardous waste enforcement case and executed by a contractor, The Environmental Quality Company. The settlement agreement was signed in March 2012 and required that \$1,050,000 be spent to provide an opportunity for farmers and households in Missouri to properly dispose of their waste pesticides and herbicides.

The Hazardous Waste Program completed 17 collection events in 2012 and 2013, collecting a total of 123,046 pounds of waste pesticides and herbicides. Less than \$60,000 remains with final expenses currently being tallied. The settlement agreement provides for remaining monies to be used for additional collection events (if sufficient funds exist) or submitted to the department to fund other supplemental environmental projects. A decision will be made on expenditures when the final amount is available.

Staff from the department's Hazardous Waste Program and Environmental Emergency Response Program was present at each event; there were no injuries or releases documented at any of the 17 events.

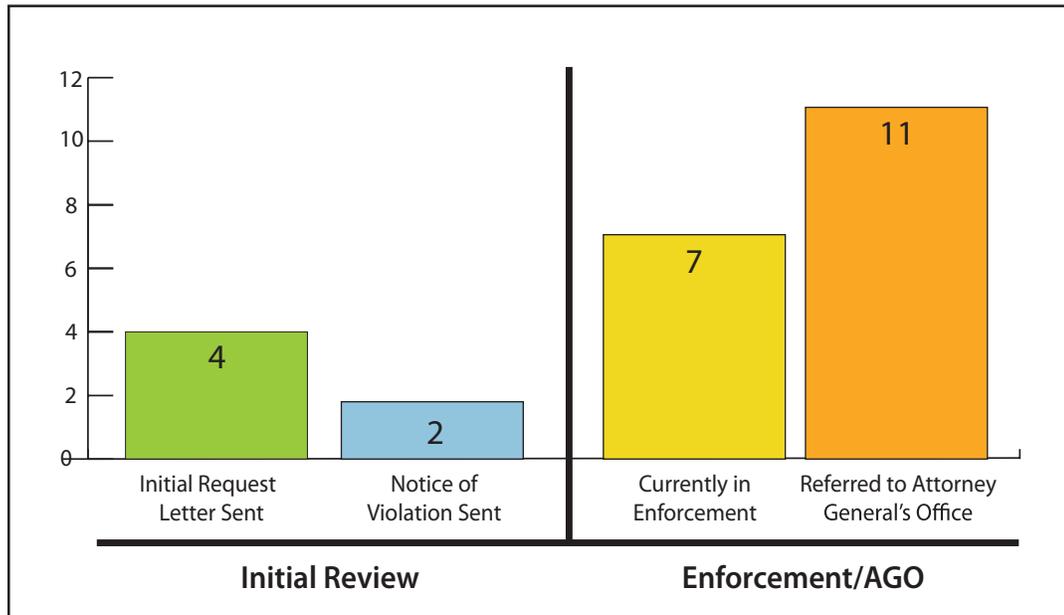
For more information about the pesticide collection program, visit the website <http://www.dnr.mo.gov/env/hwp/pesticide/> or contact Andrew Reed at 573-526-2736.

A brief overview of the completed events, locations and dates are:

Date	Location	Amount Collected
June 9, 2012	Neosho	725 lbs.
June 23, 2012	Benton	12,170 lbs.
July 7, 2012	St. Joseph	3,335 lbs.
July 21, 2012	Cameron	1,965 lbs.
Aug. 4, 2012	Bunceton	1,680 lbs.
Aug. 18, 2012	Macon	14,450 lbs.
Sept. 8, 2012	Marsha	8,930 lbs.
Sept. 22, 2012	Warrenton	25,595 lbs.
Oct. 6, 2012	Kennett	16,800 lbs.
March 9, 2013	West. Plains	6,065 lbs.
March 23, 2013	Mexico	11,915 lbs.
April 6, 2013	Maryville	2,284 lbs.
April 20, 2013	Trenton	5,675 lbs.
May 18, 2013	Troy	2,669 lbs.
June 1, 2013	Lamar	2,655 lbs.
June 15, 2013	Salem	660 lbs.
June 29, 2013	Clinton	5,473 lbs.

Underground Storage Tank Facilities with Unknown Financial Responsibility Status Report

Financial Responsibility Status	Number of Facilities
Initial Request Letter Sent	4
Notice of Violation Sent	2
Currently in Enforcement	7
Referred to Attorney General's Office	11
Total Number of Facilities with Unknown Financial Responsibility	24



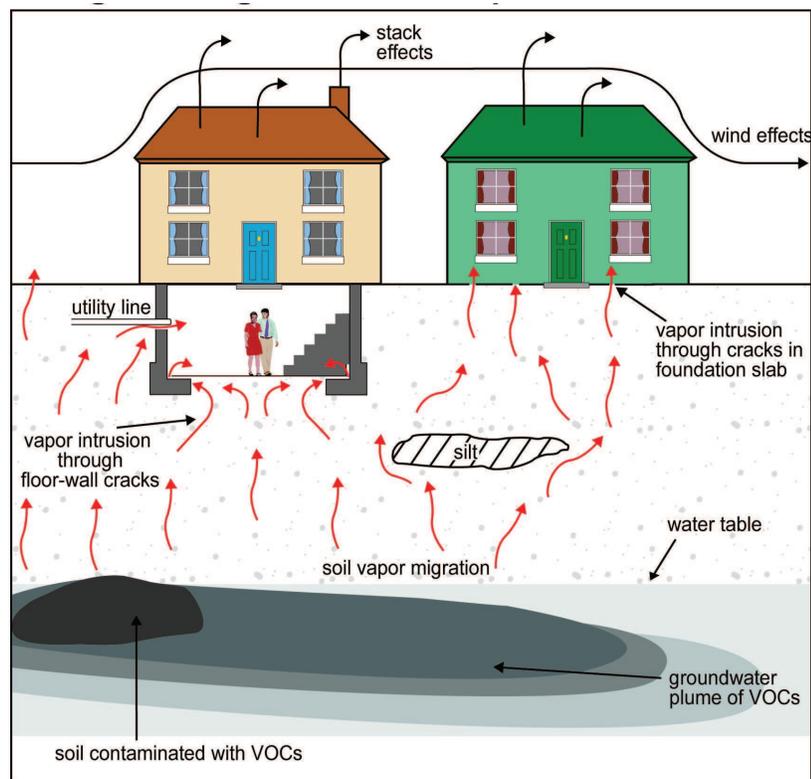
**This semi-monthly report is derived directly from a copy of the UST Database and provides a "snap shot" of the status for each active underground storage tank facility not covered by a proper Financial Responsibility Mechanism.*

What is Vapor Intrusion?

Protecting human health and the environment is the department's main mission at any hazardous waste treatment, storage or disposal facility, but even more so at facilities where hazardous wastes or hazardous waste constituents have been released to the environment. Release sources may include leaking tanks, sewer lines and pipelines, floor drains, landfills and other land disposal management units, fire-training areas, spills and discharge areas. Releases can contaminate several different media at the site, such as soil, groundwater and surfacewater. Soil and groundwater at sites are often affected where contamination has been released over a long period.

Vapor intrusion occurs when contaminants in subsurface soil or groundwater give off gases that move through soil and into homes or buildings through cracks in basement walls, crawl spaces, foundations, sewer lines or other openings. Vapor intrusion is similar to the process that occurs when radon, a naturally occurring radioactive gas, enters a home through cracks in the foundation. Vapor intrusion can occur in residential, commercial and industrial zoned areas and affect buildings with virtually any type of foundation, such as a basement, crawl space or slab on grade. The effects depend on the condition of the building. For instance, a building with more cracks in its foundation is more susceptible to vapor intrusion.

Vapor intrusion is widely recognized as a potentially significant cause of human exposure to volatile, or vapor-forming, hazardous chemicals in indoor spaces. Volatile organic compounds, commonly referred to as VOCs, are one group of chemicals that can easily become gases or vapors. Well-known examples of VOCs are petroleum products, such as gasoline or diesel fuel, dry cleaning solvents and industrial degreasers. When vapor intrusion is significant, concentrations of toxic vapors can collect indoors to a level where the health of the occupants in those buildings, such as residents and workers, could be at risk. In addition, methane and certain other volatile chemicals can create explosion hazards when they accumulate in confined spaces.



This figure depicts the migration of volatile chemicals from contaminated soil and groundwater plumes into buildings. Volatile chemicals are shown to enter buildings through cracks in the foundation and openings for utility lines. Atmospheric conditions and building ventilation are shown to influence vapor intrusion.

Identification and Investigation

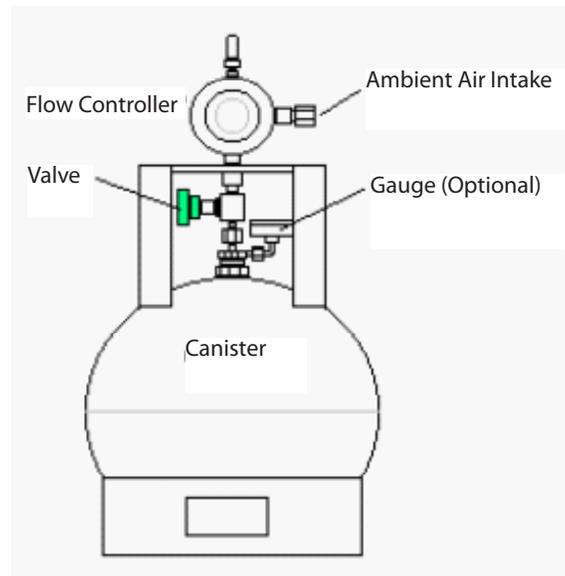
The Occupational Safety and Health Administration has jurisdiction over occupational exposures at facilities where hazardous chemicals are handled as part of manufacturing or operating activities. In this instance, vapor intrusion can occur when vapors from the hazardous chemicals enter the air in the manufacturing facilities where workers are handling the hazardous chemicals, or other buildings where chemicals are not routinely handled. Federal and State agencies often have regulatory jurisdiction in instances where a facility is operating, but is no longer handling or has never handled the hazardous chemicals detected in the vapors, or the facility is no longer operating or has a different land use. Some sites have groundwater plumes that have migrated off-site and could cause vapor intrusion in residential areas or non-residential areas such as schools, libraries, hospitals, hotels and stores. Missouri, as an EPA authorized state, operates its state hazardous waste program instead of the federal hazardous waste program. The Hazardous Waste Program's permits section works with permitted and interim status hazardous waste treatment storage and disposal facilities to address vapor intrusion issues associated with releases to the environment.

The facility and the department work together to determine what type of contaminants were released at the site and where the contamination is located. The permits section uses that information to determine possible pathways through which humans and the environment could be exposed to contamination in all media. There are three elements that must exist for the vapor intrusion pathway to be complete:

- A source of contamination, which is mainly volatile compounds.
- A potential pathway involving impacted media, such as groundwater, soil or soil gas.
- An actual or potential receptor, such as humans, near the source or pathway.

Identifying chemicals in indoor air attributable to vapor intrusion can be a complex and difficult task. The department must use several lines of evidence and professional judgment to reach conclusions regarding the source(s) of indoor air contamination. Typically vapor forming chemicals need to be present in the subsurface soil and groundwater underneath or near occupied buildings. Other evidence may include determining internal and external background sources of contamination; evaluating building construction, ventilation rates and current conditions; sampling sub-slab or near slab soil gas and sampling indoor air and outdoor air at the same time.

Traditional methods for taking sub-slab and indoor air samples involves collecting a whole air sample using summa canisters, which are stainless steel electropolished, or "summa" polished, evacuated vessels. To collect a representative sample, the summa canister is taken to a designated area and the valve is opened. The surrounding air fills the canister for a period of time, usually eight or 24 hours. The valve is then closed and the canister is sent to a laboratory for testing.



Traditional sampling methods present many uncertainties when determining the appropriate number, location, time of day, time of year and frequency of samples. The number of sample locations may depend on the size and use of the building; internal building partitions, such as walls and doors; heating, ventilation and air conditioning layout, where the contamination is located in the subsurface and observable locations of potential vapor entry. Recent research has shown continuous, time-integrated sampling, or taking several samples at different times in the same location, indicated significant daily and seasonal differences. These variations should be taken into consideration when determining the length, frequency and time of sampling.

Remediation/Cleanup

If the vapor intrusion pathway is determined to be complete, corrective action, or cleanup, activities may be required, based on the investigation results. When corrective action is required, a remedy or combination of remedies are selected, implemented, operated, maintained and monitored to control the vapor intrusion until the source of the vapors is removed. Until the remedy has met its cleanup goals, the vapor intrusion pathway must be effectively controlled in all potentially impacted and inhabited structures.

Site-wide remedies may address the source of vapors found in buildings, such as contaminated soil and groundwater, rather than controlling the entry of vapors into buildings. For site-wide remedies to be protective, exposures to unacceptable vapor concentrations must be controlled until contaminant concentrations in soil and groundwater reach acceptable levels. Site-wide remedies may be enough in situations where the vapor concentrations in buildings are very low or where the source can be removed very quickly. In most cases, site-wide remedies involve a long-term solution to vapor intrusion.

Short term remedies may be needed in the event that site-wide remedies are not immediately effective in reducing or eliminating actual and potential vapor intrusion. Institutional controls and building control technologies are often short-term remedies used until the long-term or site-wide remedy is complete. An example of an institutional control would be a restrictive covenant, which is a document recorded in a property's chain-of-title that places limitations on the use of certain parts of the property. At undeveloped sites, or at sites where land use may change in the future, institutional controls may be necessary to make sure the vapor intrusion pathway is effectively addressed in the future. An example would be to require the installation of vapor intrusion controls, such as a vapor barrier or sub-slab depressurization system, in new buildings. Taking proactive steps in the design and construction of new buildings to address potential vapor intrusion issues helps avoid some of the difficulties associated with attempting to predict the potential for vapor intrusion before building construction.

Building control technologies may include vapor barriers, limiting air infiltration into buildings or improving building ventilation. The following table includes a brief description of several building control technologies.

Technology	Typical Application	Description
Passive Barrier	New construction. Crawl spaces. Often combined with passive or active venting, sealing openings in the slab, drains, etc.	Materials or structures are installed below a building to physically block the entry of vapors. By doing this, soil gas that would otherwise enter the building under diffusion or pressure gradients instead moves sideways, beyond the building footprint.
Passive Venting System	New construction. Low soil gas flux sites. Should be convertible to active system if necessary.	A venting layer is installed below the floor slab to allow soil gas to move sideways, beyond the building footprint, under natural diffusion gradients. This is generally possible only in new construction. Passive vents are typically combined with passive barriers.
Sub-slab Depressurization System	New and existing structures. Sumps, drain tiles and block wall foundations may also be depressurized if present.	The system creates a pressure differential across the slab that favors movement of indoor air down into the subsurface. This is accomplished by pulling soil gases from beneath the slab and venting them to the atmosphere at a height well above the outdoor breathing zone and away from windows and air supply intakes.
Building Pressurization	Large commercial structures, new or existing. Sensitive receptors.	Similar to sub-slab depressurization systems, these systems use fans to push air into the soil or venting layer below the slab, instead of pull it out. The intention is to increase the sub slab air pressure above ambient levels, forcing soil gas from the subsurface to the sides of the building.
Sealing the Building Envelope	Cracks and holes in existing buildings.	Cracks and holes in the floors and foundations of existing buildings are sealed, reducing the amount of air seeping into the building. This technology works best combined with other technologies.

Examples of Vapor Intrusion Sites in Missouri

Trichloroethylene, commonly called TCE, and its breakdown components were identified in the gravel subgrade under the foundation of a former manufacturing facility that used TCE and other volatile compounds during its manufacturing processes. The chemicals in the subsurface are no longer used at the facility and the building is currently vacant. The facility owner conducted indoor air sampling in 2003 and 2010. The sample results indicated vapor intrusion into the building. Two additional rounds of indoor air and sub-slab sampling will be conducted to determine if vapor intrusion is still occurring and, if so, if the vapor levels in the indoor air are protective of human health.

Potential vapor intrusion was also a concern at a former refinery closed in the 1980s. Benzene in the soil and groundwater posed a risk for future buildings at the site. To address this risk, all new buildings on the property are required to be constructed with vapor barriers and sub-slab ventilation systems. The police and fire station also built on this property met these requirements.

Permit Updates

The permits section is nearing completion of the hazardous waste permit reissuance process for two facilities and final remedy decision process for three facilities.

Draft Permits

International Paper Co. and Mallinckrodt are in the process of renewing their Missouri Hazardous Waste Management Facility part I permit and Hazardous and Solid Waste amendments part II permit. After a thorough technical review of the permit applications, the department prepared a draft Missouri Hazardous Waste Management Facility part I permit for both International Paper and Mallinckrodt. EPA prepared a Hazardous and Solid Waste amendments part II permit for International Paper, but not Mallinckrodt, since EPA has no site-specific conditions for Mallinckrodt and Missouri is fully authorized for all permitting activities at the site.

The draft hazardous waste permits for International Paper will require continued performance of site-wide corrective action including operation, maintenance, monitoring and post-closure care activities associated with two corrective action management units and a groundwater pump and treat system. The draft hazardous waste permit for Mallinckrodt will require continued performance of corrective action investigation and remediation activities at the site. Since Mallinckrodt added a new container storage area and a new bulk storage tank for less than 90-day hazardous waste storage, Mallinckrodt no longer needs to be permitted to store hazardous waste for more than 90 days as it was in the past. The permits for both facilities will also contain contingent corrective action requirements to address any newly-identified releases of hazardous waste or hazardous constituents to the environment. The public will be invited to review and offer written comments about the draft permits before any final permitting decisions are made.

Proposed Final Remedies

The department is in the process of issuing statements of basis in support of the proposed final remedy of no further corrective action with institutional controls at the Nestle Purina PetCare Co., Alcolac Inc. and River Cement Co. facilities. The department, in consultation with the U.S. Environmental Protection Agency Region 7, proposes to release these facilities from regulation as former interim status hazardous waste treatment, storage and disposal facilities subject to the corrective action requirements of the Missouri Hazardous Waste Management Law and regulations. The public will be invited to review and offer written comments about the statements of basis, proposed final remedies and release from regulated facilities before any final decisions are made.

Cleanup Finally Complete at Former Blue Harbor Marina Site

In June 1987, the department was notified about petroleum contamination in a private drinking water well at a residence in Osage Beach. Sampling conducted by the department's Environmental Emergency Response staff confirmed the presence of petroleum contaminants in this well. A new underground storage tank, or UST, installed in spring 1987 to serve the Blue Harbor Marina was believed to be the source of this contamination. Testing of this tank found a large leak, a 12 inch hole in the bottom. Based upon inventory records, it was estimated that 3,000 gallons of gasoline were released from this tank to the subsurface.

After the release was confirmed, the UST and surrounding impacted soils were removed by the responsible party. A significant amount of released gasoline, however, had already entered the fractured bedrock beneath the site.

Within a month, two additional private drinking water wells were also found contaminated. The insurance company for the responsible party paid for the installation of three new private drinking water wells to replace those impacted. Unfortunately, a few months after the installation of these new wells, two of the new wells also became contaminated. Subsequent sampling events found 14 feet of free product floating on the groundwater in one of the old wells and free product was also found entering the lake from a seep along the shoreline.



A groundwater remediation system was installed by the department in 1993. The system equipment included an air stripper (tall standpipe) to treat the extracted groundwater and a 3,000 gallon polyethylene storage tank to contain the recovered free product.



A community well and well house was installed by the department in 1993 to provide drinking water to the affected residents.

The enormity of the situation overwhelmed the responsible party and work at the site came to a halt. Due to the failure of the responsible party to initiate the necessary investigation and cleanup of the contamination, the department declared a hazardous substance emergency. Using funding provided by the Environmental Protection Agency's Leaking Underground Storage Tank, or LUST, Trust Fund the department hired an environmental consulting firm to conduct an investigation and initiate cleanup activities, which initially consisted of pumping free product from the former drinking water wells.

In 1993, the department installed a pump and treat, or air stripping, remediation system to remediate the groundwater contamination. The department also installed a 600 foot deep community well to provide drinking water to the area residents. The community well was later sold to the Osage Water Company in 1997.

Missouri Department of Natural Resources - Hazardous Waste Program

Due to the complex geology beneath the site, which included karst features and fractured bedrock, the remediation of the contamination was slow and difficult. With the emergency situation abated in 1996, the department shut the remediation system down and directed the responsible party to take over the remediation of the site. In 2002, the responsible party hired a consultant and resumed the cleanup of the site using money from the Petroleum Storage Tank Insurance Fund. A soil vapor extraction system was installed at the site to recover the remaining free phase product from the bedrock. Then in 2006, they began conducting bioremediation activities that consisted of injecting a bioremediation-slurry into the bedrock aquifer. The responsible party operated the soil vapor extraction system until 2007 and continued the bioremediation injections until September 2009. After completion of the remediation activities, the consultant conducted a risk assessment and determined remaining contamination did not present an unacceptable level of risk to human health or the environment under current or future conditions. On April 23, 2012, nearly 25 years after the release was discovered, the department issued a no further action letter for the release at the site.

The investigation and cleanup of this release was not only complicated and lengthy, it was also expensive. The department alone spent over \$1.2 million dollars in response to this release. In accordance with the conditions for using federal LUST Trust Fund money, the department pursued cost recovery of its cleanup expenses from the responsible party. Although the department was awarded a judgment for the recovery of its cleanup costs, the responsible party was determined to be financially unable to pay the full amount. The department subsequently entered into a settlement agreement with the responsible party to resolve its cost recovery case for a total of about \$400,000. In addition to



A community well and well house was installed by the department in 1993 to provide drinking water to the affected residents.

the department's cleanup costs, the responsible party spent an unknown amount on the closure of the tank, \$10,000 to satisfy their deductible, and another unspecified amount under their claim filed with the Petroleum Storage Tank Insurance Fund.

The cleanup of the site has restored the economic value of the property and made it attractive to outside developers. Recently, the property was purchased by Surdyke Yamaha. The site is now known as Surdyke's Port 20. The facility is offering the benefits of a full service boat broker and a yacht club.

Petroleum Storage Tanks Fiscal 2013 Statistics

During fiscal 2013, the department accomplished the following work related to petroleum storage tanks:

- Properly closed 372 tanks.
- Reviewed 149 closure reports.
- Approved 143 closure notices.
- Conducted 29 closure inspections.
- Conducted five site investigations.
- Responded to 16 emergencies involving petroleum releases.
- Reviewed 1,484 remediation documents.
- Oversaw completion of 134 remediation sites.
- Issued 245 certificates of registration.

A total of 111 new releases were reported during fiscal 2013.

Department staff was notified about 71 new installations at tank sites and received 60 new site registrations.

Compliance and Enforcement Section staff resolved 76 cases involving violations.

At the end of fiscal 2013, there were 178 active enforcement cases.

Financial responsibility compliance was at 99.3 percent. This number reflects insurance coverage from both the Petroleum Storage Tank Insurance Fund and other private policies and statements.

There were 57 state or federal exempt sites. This number does not include temporary closed tanks, which are not required to have financial responsibility.

The department currently regulates 3,530 facilities with 9,221 active underground storage tanks.

**Petroleum Storage
Tanks Regulation
June 2013**

Staff Productivity	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
Documents received for review	158	184	161	207	163	131	163	162	170	149	177	154
Remediation documents processed	91	124	146	134	113	130	118	119	141	140	99	129
Closure reports processed	8	20	16	8	14	14	17	9	18	10	9	6
Closure notices approved	16	8	16	17	12	5	11	9	11	10	15	13
Tank installation notices received	7	12	2	5	2	6	8	3	12	5	4	5
New site registrations	2	9	9	7	3	3	9	1	5	5	5	2
Facility Data												
Total in use, out of use and closed USTs	40,425	40,441	40,478	40,501	40,511	40,522	40,542	40,541	40,536	40,554	40,576	40,584
Total permanently closed USTs	31,072	31,095	31,146	31,173	31,185	31,221	31,249	31,271	31,317	31,331	31,340	31,363
In use and out of use USTs	9,335	9,341	9,346	9,343	9,324	9,299	9,288	9,265	9,219	9,223	9,236	9,221
Out of use USTs	836	843	850	837	832	840	848	847	837	842	849	867
Total hazardous substance USTs	398	398	398	398	398	398	399	399	398	399	399	398
Facilities with in use and out of use USTs	3,557	3,562	3,563	3,562	3,555	3,548	3,545	3,538	3,528	3,529	3,533	3,530
Facilities with one or more tank in use	3,260	3,260	3,259	3,263	3,263	3,258	3,254	3,249	3,243	3,242	3,245	3,234

Closures

Underground Storage Tanks	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	TOTAL	All Yrs
Closure Reports Reviewed	8	20	16	8	14	14	17	9	18	10	9	6	149	
Closure Notices Approved	16	8	16	17	12	5	11	9	11	10	15	13	143	
Number of Tanks Closed (Closure NFA)	30	23	59	28	13	31	36	30	63	27	13	19	372	

Cleanup

Underground Storage Tanks	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	TOTAL	All Yrs
UST release files opened this month	11	7	10	10	5	15	6	5	5	6	6	5	91	6,514
UST cleanups completed this month	4	13	24	11	6	6	9	5	17	13	3	11	122	5,636
Ongoing UST cleanups	907	905	894	892	892	901	899	899	887	880	884	878		
Aboveground Storage Tanks														
AST release files opened this month	3	1	1	0	3	0	2	1	0	1	1	2	15	460
AST cleanups completed this month	0	2	2	1	3	0	0	1	0	0	0	1	10	268
Ongoing AST cleanups	193	192	189	189	190	190	191	190	190	191	191	192		
Both UST and AST														
Total release files-both UST & AST	0	0	0	0	0	0	0	0	0	0	0	0	0	75
Cleanups completed-both UST & AST	1	0	1	0	0	0	0	0	0	0	0	0	2	46
Ongoing cleanups-both UST & AST	29	29	28	29	29	29	29	29	29	29	29	29		
Unknown Source														
Total release files-unknown source	0	0	0	0	0	0	0	1	1	3	0	0	5	216
Cleanups completed-unknown source	0	0	0	0	0	0	0	0	0	0	0	0	0	174
Ongoing cleanups-unknown source	18	16	15	14	13	12	11	12	13	16	16	16		
Documents Processed	91	124	146	134	113	130	118	119	141	140	99	129	1,484	
*Reopened Remediation Cases	1	1	0	0	0	0	0	0	0	0	0	0	2	76

*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

**October 17, 2013
Agenda Item # 10**

Public Inquiries or Issues

Recommended Action:

Information Only

Presented by:

David J. Lamb, Director, HWP

Missouri Hazardous Waste Management Commission Meeting

**October 17, 2013
Agenda Item # 11**

Other Business

Recommended Action:

Information Only

Presented by:

David J. Lamb, Director, HWP

Missouri Hazardous Waste Management Commission Meeting

**October 17, 2013
Agenda Item # 12**

Future Meetings

Information:

Meeting Dates:

Date	Time	Location
Thursday, December 19, 2013	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, February 20, 2014	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, April 17, 2014	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, June 19, 2014	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, August 21, 2014	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101
Thursday, October 16, 2014	9:45 A.M.	Bennett Spring / Roaring River Room 1730 East Elm Jefferson City, Missouri 65101

Recommended Action:

Information Only