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FY 2016 PROGRAM REVIEW REPORT
MISSOURI'S UNDERGROUND STORAGE TANK PROGRAM
CORRECTIVE ACTION COMPONENT

November 23, 2016

United States Environmental Protection Agency
Region 7
Air & Waste Management Division
Chemical & Oil Release Prevention Branch
11201 Renner Boulevard
Lenexa, KS 66219

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I. Executive Summary

The U.S. Environmental Protection Agency approved, pursuant to 40 C.F.R. Part 281, the state of Missouri's application for Underground Storage Tank (UST) state program approval (SPA) on September 21, 2004. The EPA is required to "assess the state administration and enforcement of the underground storage tank program on a continuing basis."[1] As a result, the EPA reviews the program in a cycle of one component per year. The components include:

1) Inspection & Enforcement
2) Corrective Action
3) Closure
4) Cost Recovery

The purpose of this program review is to report on the corrective action component of Missouri's UST program. Baseline information was obtained from previous program reviews and normal programmatic interactions with the involved state organizations; namely the Missouri Department of Natural Resources (MDNR) and the Missouri Petroleum Storage Tank Insurance Fund (PSTIF). The primary focus of this program review was to follow-up on the findings from the EPA's 2012 program review report, which covered Leaking Underground Storage Tank (LUST) corrective action, particularly in light of ongoing delays at sites with the threat of or actual ongoing exposures.

The findings disclosed by this review and detailed herein indicate that the state of Missouri LUST Program, Corrective Action Component has significant problems affecting the implementation of the underground storage tank clean-up program, including at sites where people have been exposed to petroleum releases that have migrated into their homes. The result is that the state is not implementing the program in compliance with the terms of the SPA or with state law, particularly with respect to the operation of the Missouri Petroleum Storage Tank Insurance Fund (PSTIF). The program review findings can be summarized as follows:

- While Missouri is closing LUST sites each year, the time required to achieve a cleanup or site closure is longer than necessary and is increasing.
- In some instances, Missouri is failing to take timely action at sites with ongoing exposures and prioritize these high-risk cases that require more urgent attention to protect public health and the environment. Programmatic delays include:
  - The program too often allows responsible parties too long to investigate, remediate, and complete projects. Investigation and remediation activities are often done in piecemeal fashion, drawn out over unnecessarily long periods of time.
  - MDNR needs improvement in tracking project progression and exercising its enforcement authority when necessary.
  - MDNR Tanks Section is short-staffed and lacking in key disciplines, which limits its ability to address inefficiencies, high-risk sites, and pushback from opposing parties.
- Though Missouri laws, regulations, and agreements sufficiently delineate the roles and responsibilities of PSTIF and MDNR, PSTIF regularly becomes involved with technical decisions regarding the scope and nature of the cleanup required by MDNR. PSTIF's participation in the technical scope of characterization and cleanup work being performed at individual projects exceeds its statutory authority. The consistency of this dynamic causes the EPA to seriously question whether

[1] 40 C.F.R. § 281.24 requires that a state's application for SPA must include a Memorandum of Agreement (MOA), and the MOA must contain a provision for EPA oversight. The Missouri oversight provision is in Section III of the MOA.

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the state's FR mechanism is meeting its obligation to provide the availability of funds for taking the corrective action required by MDNR.

- Missouri's program components (including the SPA and financial responsibility (FR) mechanism) are organized and allowed to operate in an inefficient manner that creates unnecessarily greater risk to the public health and environment at sites with ongoing complaints and exposures, and inefficiently makes use of federal grant dollars.
  - MDNR must make an annual funding request to the PSTIF board for a significant portion of the funds required to run the tanks program, which hampers MDNR's ability to challenge PSTIF's involvement in site cleanup decisions. The PSTIF board recently tabled MDNR's current funding request of $1.38 million until this program review report is issued.
  - The PSTIF Board does not appear to be accountable to other parts of the Missouri state government for ensuring the fund operates within the parameters of the state law that established the fund. The Missouri State Auditor last performed a management audit in 2011, and the PSTIF board largely dismissed the audit recommendations.

As a result, the state agencies responsible for the UST program are not functioning together to meet the intent of the SPA, the federal law, or the requirements of state law. Prompt funding is the EPA's greatest concern because lack thereof causes the greatest threat of exposure to the public.

This is exemplified by a matter in Kansas City where an inner city neighborhood is currently being exposed to vapor intrusion from gasoline caused by leaking USTs. MDNR issued a clean-up order to a responsible party who, with PSTIF's financial backing, is now opposing the order in the Circuit Court of Jackson County, Missouri.[2] In effect, two State agencies are in litigation against each other in a state court, while no clean-up action is taking place and members of the public are exposed to gasoline in their homes.

These findings are discussed in greater detail within this program review. The EPA will require Missouri to respond to these findings, within 45 days of issuance of the final program review report, with a comprehensive and detailed written plan signed by both MDNR and PSTIF, to correct these deficiencies.

II. Background Information

The EPA has the authority to approve or disapprove a state UST program to operate in lieu of the federal UST program pursuant to 40 C.F.R. Part 281. The state program must include specific elements of a UST program (new systems, upgrading systems, general operating requirements, release detection, release investigation/confirmation/reporting, UST out-of-service/closure, release response and corrective action, financial responsibility, and operator training) and demonstrate that program elements are no less stringent than federal criteria and that adequate enforcement tools exist. 40 C.F.R. Part 281 and its preamble stress that the overarching goal of a UST program must be the maximum protection against threats to human health and the environment. In order to meet this goal, a UST program must be both <u>effective</u> (technically sound) and <u>efficient</u> (prompt). As emphasized in the preamble to the UST regulations, the potential for environmental damage is too great to allow the source of a release to go unidentified and unchecked.[3] The EPA Regional Administrator has the authority under 40 C.F.R. Part 281 Subparts E and F to approve a state UST program and withdraw approval of either the program, the

[2] *State of Missouri, et al. v. Zill, LLC*
[3] 53 Fed. Reg. 37170.

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financial responsibility mechanism, or both. A withdrawal or disapproval will largely be based on program performance toward achieving the overarching goal.

A. Program Information

The EPA approved, pursuant to 40 C.F.R. Part 281, the state of Missouri's application for state program approval (SPA) on September 21, 2004. On April 13, 2004, the state of Missouri and the United States Environmental Protection Agency entered into a Memorandum of Agreement (MOA) concerning the UST program. The SPA and the MOA established state performance methodologies, criteria and goals and a framework for cooperation between the state of Missouri and the EPA. Section III of the MOA stipulates that the EPA "will assess the state administration and enforcement of the underground storage tank program on a continuing basis." The purpose of this document is to report on select components of the state of Missouri's UST program. In the SPA ("Document 2"), the state of Missouri stated commitments to the following objectives (among others) related to this review:

- Provide for Release Reporting, Investigation and Confirmation Requirements
- Provide for Release Response and Corrective Action Requirements
- Provide for UST Out-of-Service and Closure Requirements
- Provide for Financial Responsibility Requirements

B. State Agency Information

The Missouri UST program was certified by the state of Missouri's Attorney General Office (Mr. Jeremiah W. Nixon, Attorney General, and Joseph P. Bindbeutel, Assistant Attorney General) on June 26, 2003, approved by the Governor of the state of Missouri (Mr. Bob Holden) on July 28, 2003 and promulgated by the EPA on September 21, 2004 (via the SPA). The agency charged with operating the state UST program is the MDNR, which is headquartered in Jefferson City, Missouri. At the time of this review, responsibilities rest within the Tanks Section (Ken Koon, Chief) of the Division of Environmental Quality (Leanne Tippett Mosby, Director) of the MDNR.

Missouri law governing the use of underground storage tank systems is found primarily in Chapter 319.100-139 RSMo and in Title 10, Division 26 of the corresponding MDNR regulations. The regulations govern the organization of the tanks program, the technical regulations, the financial responsibility requirements, administrative penalty authorities, and provisions related to above ground storage tanks.

The PSTIF was established as a mechanism for providing FR for the investigation and clean-up of releases from regulated UST systems. The Missouri law governing PSTIF is found in Chapter 319.100-139 of the Revised Statutes of Missouri and in Title 10, Division 100 of the corresponding regulations. These regulations govern the organization of the PSTIF, provide relevant definitions, provide for assessment of transport load fees, describe participation requirements, lay out the claims process, and provide for UST operator training.

The general administration and operation of PSTIF (a "Type III" state agency) is vested in a board of eleven trustees. Eight of these board members are individuals appointed by the governor with advice and consent of the state senate. Six of them are required to be representative of UST owners or operators, financial institutions, and/or the insurance industry. Two must be citizens with no connection to the petroleum industry. The remaining three board members come from state executive agencies: MDNR,

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the Missouri Department of Agriculture, and the Missouri Office of Administration.[4] At the time of this program review, it appears that the terms of most of the board members have expired but those appointees are still performing their duties. Administrative management consists of an Executive Director (Ms. Carol Eighmey). PSTIF exists within MDNR organizationally, but it is unclear to EPA to whom it is accountable. Most of the fund's staff is comprised of contract employees (Williams and Company, Inc. of Jefferson City, Missouri) filling the role of claim adjustors. Approximately 80% of tank systems in Missouri utilize PSTIF as an FR mechanism.

III. Program Review Process and Previous Recommendations

EPA Region 7 has established a state tanks program review process whereby the review is broken into four segments (Inspection and Enforcement, Corrective Action, Closure, and Cost Recovery) over a four-year time period. The latest, full cycle commenced in 2011 and was completed in 2014. Previous to that, the corrective action component was reviewed in 2004. The 2011-2014 cycle of component reviews included in-depth, comprehensive reviews of the program components. Much of the program component material has not changed significantly over time. In an effort to streamline the program component reviews going into the future, the 2011 to 2014 program component reviews will be used as baseline reviews.

The review in 2004 was less extensive than the instant review and recommended more advanced project management and corrective action technical training for MDNR staff. In addition, the 2004 review concluded that *"PSTIF frequently intervenes in cleanup decisions (driven by a cost perspective) and that has resulted in delay at certain sites. In some cases, loss of PSTIF coverage has brought cleanup actions to a halt."* On this count, the 2012 findings were consistent with the 2004 findings. However, the 2012 review found additional issues as summarized below.

Key findings of the 2012 review, fully reported in *"FY 2012 Review of Missouri's Underground Storage Tank Program – Corrective Action Component,"* February 6, 2013, can be summarized as follows:

- Poor communication and working relationship amongst the involved parties (MDNR, PSTIF, consultant, owner/operator, responsible party)
- A deficit of LUST technical knowledge (experienced engineers, geologists, etc.) amongst MDNR personnel overseeing LUST projects
- A lack of appropriate enforcement actions and/or follow up to spur timely corrective action
- Less than clear guidance on Risk-Based Corrective Action (RBCA)

The 2012 review also include the following language in its conclusions:

> *"These challenges currently cause inefficiencies in the program and are the source communication issues, delays, derision and animosity amongst the parties involved. These problems certainly contribute to the backlog of LUST corrective action projects in the State of Missouri and the average age of the projects in that backlog.*
>
> *However, at this time the USEPA is not prepared to identify these problems as points of non-compliance with the SPA. If these problems are left unsolved and allowed to deteriorate over time, they will continue to worsen program conditions and may result in non-compliance in the future."*[5]

[4] 10 CSR 100-1.010(2).

[5] Page 26 of 2012 Program Review Report

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Over the past four years, MDNR has made improvements to its RBCA policies/guidance and its enforcement system. Hence, these are touched upon below but were not a primary focus of this review. Over those same four years, EPA has not seen significant improvements to the communication and working relationship amongst the involved parties or the technical knowledge of MDNR staff. In fact, the EPA's monitoring of these two findings over the past four years has led the agency to expand its concern to other program issues connected with the findings in 2012, particularly because they have been magnified at sites where there are ongoing complaints of odors and exposures to the public. These issues include, but are not limited to, adequate and prompt protection of human health and the environment, efficiency and effectiveness of the LUST site investigation/closure process, and the operation of state agencies responsible for administering the program and staff resources. As a result, this review focuses on areas where these programmatic problems continue.

This program review was performed within the parameters established by the EPA's "*Program Review Guidance, USEPA, Region 7,*" October, 2013, and guided by "*Appendix 2 – Program Review Decision Criteria*" included therein.

The EPA Review Team included:

- Douglas Drouare — Lead Program Reviewer
- Raymond Bosch — Program Reviewer
- Wilfredo Rosado-Chaparro — Program Reviewer
- Heather Collins-Allen — Record Control and Technical QA/QC

Data was collected and reviewed from a variety of sources. These included the following:

- Data from the 2012 program review
- Data collected during regular interactions between Missouri and EPA
- Interviews with MDNR management
- Interviews with MDNR project managers
- MDNR project file reviews
- Interviews with PSTIF management
- Interviews with PSTIF claim adjusters
- PSTIF project file reviews
- Interviews with consultants doing LUST work in Missouri

On June 9, 2016, EPA staff met with MDNR management/counsel staff. Attendees included:

- Mr. Ken Koon — Tanks Section Chief
- Mr. Steve Sturgess — Director, Hazardous Waste Program
- Mr. Aaron Schmidt — Deputy Director, Division of Environmental Quality
- Ms. Leanne Tippett Mosby — Director, Division of Environmental Quality
- Mr. Marty Miller — General Counsel's Office
- Mr. Don Willoh — General Counsel's Office

On June 28 through July 1, 2016, EPA staff met with MDNR Tanks Section staff supervisors and project management staff. Attendees included:

- Ms. Laura Luther — Staff Supervisor
- Mr. Chris Veit — Staff Supervisor
- Mr. Daniel Scollan — Environmental Specialist

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- ☐ Ms. Valerie Garrett — Environmental Scientist
- ☐ Ms. Vickie Olive — Environmental Specialist
- ☐ Mr. Steve Lang — Environmental Engineer
- ☐ Mr. Vince Henry — Environmental Specialist
- ☐ Mr. David Walchshauser — Environmental Specialist
- ☐ Mr. Justin Buckler — Environmental Specialist
- ☐ Mr. Hashim Mukhtar — Environmental Specialist

MDNR files reviewed:

R001041	Former Kirkwood Amoco
R001044	Former Jr's Food Mart
R001088	Former Bridgeton Mobil
R001307	Former Mobil #5
R001699	Former Fina Citgo
R001720	Youssef Group, LLC
R001850	Nine Pumps
R002041	Macon Conoco
R002219	In and Out Food Mart
R002382	Hocker Oil
R002469	Buck's Inc #668
R002668	Wallis Petroleum
R003067	U-Gas
R003271	Casey's General Store #1033
R003291	Former Big Boy's Little Store
R003926	Piasa Pantry
R004043	Affton Mobil
R004600	Ruskin's Pump Station
R005083	Former Finley's Conoco
R005550	Squaw Creek Truck Plaza
R006384	Townley's Station and Car Wash
R006608	Wichita Coca Cola
R006771	Brown's General Store
R007247	Troy Service Station
R007612	Trex Mart #6
R007846	Former Triple K
R008119	Jaeger's Tire Store
R008123	Lawson's Quick Shop
R008231	Kum & Go #491
R008361	Dominator Fuels Rock Port
R008384	Casey's General Store #2695
R008682	St. Joe Petroleum
R008697	Fastrip #40
R008151	Kennett Conoco
R008868	Bee Line Snack Shops
R008920	Breaktime #3156
R008929	Wood Oil
R009066	Jone's Travel Mart
R009051, R009052 and R009133	Main Street Shell

R008661, R008771 and R009048 Zill's

Variations of the site name may exist in this list as they exist in the MDNR records.

On August 9 and 10, 2016, EPA staff met with PSTIF management. Attendees included:

- Ms. Carol Eighmey Executive Director
- Mr. Dave Walters Williams and Company (Claims Management Contractor)

The following files were reviewed:

R001041	Former Kirkwood Amoco
R001044	Former Jr's Food Mart
R003271	Casey's General Store #1033
R007247	Troy Service Station
R008384	Casey's General Store #2695
R008697	Fastrip #40
R008151	Kennett Conoco
R008920	Breaktime #3156
R009066	Jone's Travel Mart
R003027	Amoco Oil Company BP-678
R006799	Henry's Automotive
R002440	Poplar Bluff C-Mart
R007647	Desoto Citgo
R007465	Speedy's Convenience #1
R003694	Cassen's Transport Company

Variations of the site name may exist in this list as they exist in MDNR and PSTIF records.

The EPA interviewed several consultants that perform LUST work in Missouri, because they are important to the process of cleaning up UST releases. These conversations occurred via telephone.

Additional sources of information for this program review included (appended):

- 40 Code of Federal Regulations Parts 280 and 281
- "Revising Underground Storage Tank Regulations – Revisions to Existing Requirements and New Requirements for Secondary Containment and Operator Training," Final Rule. Federal Register, Vol. 80, 41566 (July 15, 2015).
- State Program Approval and Memorandum of Agreement (Missouri/EPA)
- MDNR & PSTIF Memorandum of Understanding (08/02/1999)
- Applicable state statutes, regulations, guidance, etc.
- Cleanups and Claim Closure – DNR Presentation (07/12/2016)
- Joint DNR/PSTIF Plan for Addressing Missouri's LUST Backlog (03/2014)
- Report on Joint DNR/PSTIF Backlog Plan (02/2015)
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- State of Missouri Compensation & Benefits Study Report (07/29/2016)
- Notes – Meeting with DNR and EPA (PSTIF – 08/09/2016)
- Remediation Project Difficulties & Delays – DNR Presentation (07/20/2016)
- Tanks Staff Experience (MDNR – 08/2016)
- Contractor Experience (PSTIF – 08/2016)

- USEPA Letter to PSTIF Board of Directors (03/15/2016)
- Historical LUST 4 Data (Mid-Year and End-of-Year Reports)
- Historical Fund Soundness Reports (Report Data Dating Back to 2010)
- Various other discussions/resources engaged in/exchanged between Missouri and the EPA in the course of program monitoring

IV. EPA's Findings

A. Programmatic Management Factors Causing Delayed Cleanups

Missouri is closing a substantial number of LUST sites each year as reported to EPA in LUST 4 and annual fund soundness reports. However, this achievement does not outweigh the fact that due to programmatic inefficiencies, too many sites are taking longer than necessary to characterize and cleanup. These inefficiencies are reflected in regional tracking data, which shows that the average time required to complete a cleanup in Missouri is trending upward from 83 months in 2010 to 99 months in 2015.[6] Inefficiencies lead to delays, wasted financial resources and increased risk to the environment and public health. Efficiency and effectiveness are equally, and arguably more, important than the raw performance numbers. Despite this troubling trend, it is apparent that a number attempts were made since the 2012 Program review to improve programmatic management.

Improvements

- MDNR has made improvements to its RBCA system. These improvements included:

  - Revised its RBCA guidance document to a 2013 standard
  - Passed supporting regulations and statutes
  - Performed outreach to the regulated community via updating their web page, mailings, and public presentations
  - Issued necessary revisions and errata over time
  - Generated applicable template documents
  - Added clarifications and supporting information related to restrictive covenants and activity use limitations
  - Revised cleanup criteria numbers to modern standards
  - Adopted its own vapor intrusion protocol

  MDNR acknowledges that continued refinements and outreach training for the regulated community and consultants are needed.

- MDNR introduced a project activity tracking system that gives notice to the Tanks Section Chief when there has been no known activity at a site for over 90 days. However, PSTIF requires a 30-day response time for its contractor deliverables. PSTIF also makes a strong effort to maintain communications with claimants and their consultants. MDNR should require a similar timeframe for project management notifications.

- MDNR acknowledged that historically they have not always taken timely enforcement actions (Appendix 12). MDNR has recently been more timely with enforcement, increasing the frequency

[6] Annual Fund Soundness Report Data

with which it uses its enforcement tools. MDNR reported that the processing of reports and enforcement documents is more efficient.

The EPA reviewed numerous files where projects languished for years with no communications or enforcement activity. These largely occurred in the 1990's and early 2000's. It was apparent from review of project files that Missouri's improvements have been unable to overcome some of the challenges summarized below.

Deficiencies

Incremental Project Management and Availability of Funds

Projects move along slowly, in some cases stalling completely, rather than in a manner that provides maximum protection of public health and the environment (R009051/R009052/R009133, and others – see Appendix 1). Projects are managed and progress in a "piecemeal" fashion. Instead of tackling projects from a full-scale holistic perspective with flexible contingency plans to address changing circumstances, responsible parties and their consultants address their responsibilities in small, focused, incremental, and inflexible steps. Some of this is because MDNR allows responsible parties and their consultants too long to respond to MDNR's requirements for investigation. In other cases, PSTIF challenges MDNR's directions and in fact disapproves of work upfront, effectively not making funds available for corrective action. Contractors often then take too long to respond and approach projects in an incremental fashion because they fear PSTIF will not reimburse them for their work. Nearly every project file the EPA reviewed exhibited the piecemeal characteristic (see Appendix 1). Delays are enabled by allowing longer than necessary response times to MDNR questions and deadlines (as long as 90 days).

Allowing responsible parties to perform work incrementally, and/or PSTIF challenging the work required by MDNR (R001041, R001044, and others – see Appendix 1), not only draws the project timeline out but increases cleanup costs and lengthens the duration of risk posed to the public. This is even evident at sites where complaints and actual or potential exposures continue, as will be highlighted later in this report.

Finding: MDNR is managing projects incrementally and allowing lengthy response/notification timelines which delay investigations and corrective actions. This is exacerbated by PSTIF challenges to MDNR, often by refusing to pay for investigations and corrective actions required by MDNR.

Corrective Action: PSTIF must make funds available early for release investigations and corrective actions, to ensure that the work directed by MDNR is performed in a timely manner. MDNR should implement shorter response requirements and a LUST site investigation and corrective action system that encourages a large-scale, holistic approach with flexible contingency plans to address changing circumstances.

Staffing Deficiency

The MDNR has a staffing deficiency that contributes to a "piecemeal" approach to project management and progress. It was apparent that the MDNR Tanks Section's staff is committed. However, as of the date of the meeting, the Tanks Section staff (12 individuals) was managing a total of 1,007 projects; an average of 83 projects per individual. This workload is not manageable given that technical and legal

challenges are often encountered. The interviews and file reviews indicated that the MDNR's project managers are sometimes reticent or not empowered to make important decisions and workload backs up further, particularly on complex projects. This is particularly evident and exacerbated when there are periods of transition such as when new clean-up criteria were being implemented, when new staff were being hired and trained, and when management or responsible party consultants changed. MDNR is insufficiently equipped to absorb these transitions, which contributes to delays.

The EPA reviewed files that also indicated PSTIF and/or consultants acted on their own accord without involving MDNR or acting against MDNR's directives (R008384, R006384, R007247 and others – see Appendix 1). A lack of staff stability and insufficient/inconsistent staffing enables this and causes PSTIF and RPs to complain that there is an appearance of, or an actual, "moving target" of cleanup criteria and a stream of "what if" scenarios that also stretch out timeframes. Staff are not able to maintain the necessary familiarity with details and status of projects in order to be responsive when responsible parties, contractors, and PSTIF-hired claims adjustors do engage. Where contractors are inexperienced or their quality of work is questioned, MDNR does not have enough staff to oversee and verify the work. On the other hand, as of 2015, PSTIF reported having 16 contract claim managers (nearly all scientists and engineers) managing 785 claims; an average of 49 claims per manager.

MDNR is not only deficient in staffing numbers, but more importantly in key disciplines such as geologists and engineers. Pay structure within the department makes it difficult for the section to retain professional geologists and engineers.[7] As a result, the Tanks Section must outsource geological and engineering expertise to the Missouri Department of Geology and Land Survey. The mere logistics and procedural formalities of working across departments is evident in delays on the order of months.

Finding: MDNR lacks sufficient staff, and training for staff, to adequately oversee all projects, especially when challenged by RPs, their contractors, or PSTIF.

Corrective Action: The EPA recommends an increase in state funding to MDNR to address staffing shortfalls and technical training. The state should provide MDNR with the resources for at least four more project managers with engineering, geology or other applicable and relevant technical expertise/experience. The EPA also believes more technical outreach, training and guidance is needed for government and contractors alike on free product recovery, plume stability analysis, conceptual site models and groundwater use/risk classification.

Enforcement

The EPA observed particularly lengthy delays (months to years) in cases where RPs, represented by PSTIF-funded legal representation, challenged MDNR directives. Naturally, the involvement of legal counsel requires extra steps that increase project timelines. In a few recent cases, MDNR has issued compliance orders and taken other enforcement actions against responsible parties.[8]

The state has both order and penalty authority to address violations of the UST regulations. Chapter 319 of the Revised Statutes of Missouri makes it unlawful for any owner or operator to cause or permit any violations of the statutory provisions regulating USTs, or any standard, rule, regulation, order or permit

[7] See, *e.g.*, Appendix 12
[8] *E.g.*, Main Street Shell Administrative Order on Consent HWP-T-16-16

term or condition adopted or issued pursuant to that chapter.[9] It further provides the authority to issue an order requiring compliance within a reasonable specified time period,[10] as well as the authority to assess penalties not to exceed $10,000 per violation per day.[11,12] The mechanics of calculating administrative penalties are laid out in the regulations.[13] These authorities are given to the MDNR, which then may choose to refer enforcement actions, such as failure to comply with a compliance order, to the Attorney General's office.[14]

Recommendation: The EPA recommends MDNR issue orders earlier and more often. The EPA also recommends MDNR consider referring cases that are particularly problematic to the EPA for enforcement.

B. Continued PSTIF Interference in MDNR's Cleanup Program

Roles and Responsibilities

It is the realm of MDNR to develop and apply UST performance standards. The Missouri statute provides:

> "The department shall issue performance standards for underground storage tanks… The performance standards shall include, but shall not be limited to, design, constructio n, installation, piping, release detection, operation, and compatibility standards."[15]

Similarly, it is MDNR's responsibility to develop and implement requirements for releases and corrective actions. The statute requires MDNR to:

> "establish requirements for the reporting of any releases and corrective action taken in response to a release from an underground storage tank, including the specific quantity of a regulated substance, which if released, requires reporting and corrective action. …The department shall use risk-based corrective standards which take into account the level of risk to public health and the environment associated with site-specific conditions and future land usage."[16]

EPA believes this responsibility includes determination of the extent of work necessary to advance particular LUST sites to closure.

Meanwhile, the PSTIF board's responsibility is the fiduciary management of the fund. The state statute provides:

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[9] RSMo § 319.127(1) (2016).
[10] Id.
[11] RSMo § 319.127(2) (2016).
[12] RSMo § 319.139(1) (2016).
[13] 10 CSR 26-4.080, "Administrative Penalty Assessment"
[14] Such was the case in *State of Missouri Ex. Rel. Chris Koster Attorney General, and the Missouri Department of Natural Resources v. Zill, LLC.*
[15] RSMo § 319.105(1)
[16] RSMo § 319.109.

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> "The board shall determine and prescribe all rules and regulations as they relate to fiduciary management of the fund, pursuant to the purposes of sections 319.100 to 319.137. **In no case shall the board have oversight regarding environmental cleanup standar ds for petroleum storage tanks.**"[17] (emphasis added)

"Cleanup" is defined as "all actions necessary to investigate, contain, control, analyze, assess, treat, remediate or mitigate the risks of a petroleum release to achieve risk-based standards established by the Department of Natural Resources."[18]

As such, the fund is authorized to determine "eligible, reasonable, and necessary costs" for specified activities for reimbursement from the fund.[19] To implement this authority, the board is permitted to reject proposed costs or estimates "if, in the opinion of the board and at its sole discretion, such costs are ineligible, unreasonable, or unnecessary." The regulations provide that the board retains authority to make a determination concerning eligibility, including "whether the costs incurred were necessary to achieve the cleanup **required by the Department of Natural Resources**"[20] (emphasis added).

State law further provides that:

- Owners and operators must **immediately** investigate and confirm all suspected releases of regulated substance requiring reporting … within seven days **or another reasonable time period specified by the department** (emphases added).[21]

- 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.[22]

- 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 (emphasis added).[23]

Reliability of Financial Responsibility

Despite these relatively well-defined roles, the EPA has observed that PSTIF has declined to fund work required by MDNR on a fairly routine basis before, during, and after the characterization and cleanup stages of work. File observations indicated this occurring on a number of projects (R003271, R007846, R006621, R005550, and others – see Appendix 1). It is the observation of the EPA that the use of PSTIF's rejection authority has crossed into the realm of influencing the proper and timely characterization and extent of environmental cleanup standards for specific LUST sites for which

[17] RSMo § Section 319.129(13).
[18] 10 CSR 100-2.010(8).
[19] 10 CSR 100-5.010(9).
[20] 10 CSR 100-5.010(3).
[21] 10 CSR 26-2.052(1)
[22] 10 CSR 26-2.078(1)
[23] 10 CSR 26-2.082(1)

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MDNR is the agency approved by EPA to implement the tank cleanup program.[24] PSTIF itself has acknowledged this involvement and both MDNR and PSTIF agree that there is a lack of understanding or acceptance of the roles and responsibilities of MDNR, PSTIF, owners, and consultants.[25]

Notably, this brings into question the reliability of financial responsibility for taking corrective action at these sites. More troubling to the EPA is that it appears this is most common when LUST contamination migrates off of the site and causes extensive citizen complaints of odors and vapors in their homes or businesses, lengthier threats of exposure, or actual direct exposures to the public.[26] This failure to stay within statutory authority has been observed in a number of ways, a few of which are described below.

- Instead of RPs' consultants responding to the MDNR's requirements, which are intended to protect the public, consultants have to negotiate and draft multiple iterations of proposals, work plans, and reports shuffling back and forth between MDNR and PSTIF until both parties are satisfied. Consultants and MDNR stated in interviews (and the EPA's file/data review supports) that PSTIF's involvement in this manner causes delays at 30% to 50% of LUST projects.

  The delay of site cleanups often extends the duration of contaminant exposure to the public. Consultants are caught in the middle between what is necessary to meet MDNR requirements, and PSTIF refusing to make funds available to reimburse them for that work. PSTIF exerts this influence over time by 1) paying responsible party consultants only for work they pre-approve, 2) releasing or not recommending/referring consultants that disagree with their opinion 3) creating a climate in Missouri where LUST work is only profitable where PSTIF direction is followed. The consultants interviewed for this review asked not to be identified due to fear of business repercussions from PSTIF.

- PSTIF claims adjustors review proposed scopes of work and predetermine technical services for which they will reimburse without MDNR's awareness. In the case of Cassen's Transport Company (R003694), adjustors coached consultants on how to argue the technical merits of MDNR's demands or requirements (PSTIF internal e-mail exchange). In other cases such as Kennett Conoco (R008151), PSTIF hired consultants to perform consulting, characterization, or mitigation services without MDNR's knowledge. For the Kennett Conoco case, PSTIF actually hired a consultant independently from the responsible party's (RP's) contractor and without MDNR's knowledge, specifically to evaluate and contradict MDNR RBCA evaluation of the site and the RP's contractor proposed corrective action remedy. This also occurred at the Main Street Shell site where odor complaints and potential exposures have persisted for over a year. File observations indicated that PSTIF acted in this manner on several occasions (R008384, R006384, R007247 and others – see Appendix 1). At least one consultant interviewed stated that limits of their technical and ethical expert opinions were stretched doing work in this manner.

  These dynamics were more pronounced on sites where free product was present, plume stability is in question, or when third-party complaints and actual or threatened exposures are present. These cases pose the greatest potential to approach or exceed the $1,000,000 Financial Responsibility cap for cleanup or where third-party damage claims may occur. File observations indicated this on a number of occasions (R009051/R009052/R009133, and others – see Appendix 1).

[24] See EPA and PSTIF (April-June 2016)
[25] See Appendices 11 and 12.
[26] See Appendix 1.

- PSTIF staff stated during the interview that LUST sites with the most potential for redevelopment do require and justify more urgent attention than other sites. While EPA does not disagree that this is an important factor and hopeful outcome for at contaminated sites, the intent of the UST laws and regulations is for the protection of the public health and the environment. Therefore, the state should direct the greatest urgency, attention, and resources to the sites where it knows there are real or significant threats of public exposures.

- PSTIF has leverage to accomplish this influence since it controls a significant portion of the funding for the state program. It is able to hire more contract claim managers with higher levels of technical qualification than MDNR is able to hire technical staff. It is able to fund training for its contractors while being party to a funding process that limits funding for MDNR to conduct training. Therefore, it is able to interact directly and more frequently at the LUST sites with contractors. A number of contractors that choose not to heed this influence believe they are limited in their opportunities to work in Missouri or have voluntarily decided not to. This has reduced the pool of technical contractors which appears to have contributed to a slower pace of characterization and cleanup. Although responsible parties technically hire their consultants, PSTIF does provide lists of consultants for them to consider.

PSTIF acknowledges the extent of the technical involvement of its contract adjustors. During interviews, PSTIF staff stated they believe it is the fund's statutory authority and duty to protect its insured against what they define as "erroneous claims." Therefore, they believe it is their duty to question the necessity and limit characterization and cleanup activities routinely, even at sites with ongoing complaints and exposures. This view puts two state entities in direct opposition. MDNR's only leverage to protect the public health and environment where there is a dispute over technical merit is legal enforcement authority.

Uncertainty regarding the availability of funds for corrective actions and technical overreach by PSTIF are clearly demonstrated in LUST projects like Main Street Shell (MDNR R009051, R009052 and R009133 – three different releases in less than a year with petroleum vapors evident in homes across three city blocks) and Zill's (MDNR R008661, R008771 and R009048). PSTIF even utilized funds for legal defense against MDNR's orders for performing work at these sites. Please see Section V of this report for further discussion regarding these two sites.

Finding: EPA is very concerned that the financial responsibility from PSTIF is unreliable on many projects, particularly where there are significant or actual threats of exposure. The EPA believes that Missouri laws, regulations, and agreements sufficiently delineate the roles and authorities of PSTIF and MDNR. In state law and in EPA's State Program Approval, MDNR is the authority to establish corrective actions, yet PSTIF interjects itself regularly into that role. It is obvious the same clarity of roles does not exist between PSTIF and MDNR.

Corrective Action: The agencies must operate in accordance with roles defined in state law. In order for PSTIF to continue to be an approved FR mechanism, it must reliably and promptly fund the cleanup actions required by MDNR. EPA requires a corrective action plan and schedule outlining how the state interagency agreements or law will be established or changed to correct this situation.

C. Organizational Challenges

PSTIF Organization

The PSTIF was established in 1989 pursuant to Chapter 319.100-139 RSMo and under Title 10, Division 100 of the corresponding regulations. PSTIF's mission, as stated on its website, is to *"... work to ensure that monies from the Fund are effectively used to clean up the environment; that Fund participants receive timely, professional services; and that the Fund's resources are economically used in order to benefit the maximum number of Missourians."*[27]

The organizational unit responsible for managing the fund is technically located within MDNR but is operated by a board of trustees that was formed in 1996 and it is uncertain to the degree it is accountable to the MDNR Director. PSTIF is currently a standalone type III state agency. The general administration and proper operation of the fund is vested in a board of trustees.[28] The board consists of eleven individuals. Eight are appointed by the governor with the advice and consent of the senate; six from owners and operators of facilities with petroleum storage tanks. The other three are members of executive branch agencies. At this time, the terms of five of the eight public (non-executive branch) members are expired, including the board chairman, Mr. Donald McNutt. In addition, one of the two seats representing the general public is vacant. According to PSTIF's website, after trustees' terms expire, they continue serving until replaced or reappointed. However, this review found no basis for that statement in the Missouri law establishing the PSTIF.

Administrative management consists of an Executive Director and an office assistant. Although these individuals are technically MDNR employees, they do not appear to report to the MDNR Director. The PSTIF board receives infrequent management audits performed by the Missouri State Auditor, most recently in 2011,[29] however, the board does not appear to be under any obligation to implement the Missouri State Auditor's recommendations.

The PSTIF Board currently contracts with a private company, Williams & Company Consulting, Inc. (according to its website) to provide third party administration services, including receiving and processing applications for insurance coverage, sending renewal notices, receiving and processing claims, and other accounting and record keeping services.

MDNR Organization

The agency for Missouri with the authority for implementing SPA is the MDNR. MDNR's mission is to protect the public health and the environment. MDNR is led by a Director who is appointed by and accountable to the Governor. The MDNR Tanks Section is located in the Hazardous Waste Program in the Division of Environmental Quality.

Conflict

It is not unique, although it is uncommon, to have the state UST SPA program and the state FR mechanism administration housed and managed separately. Though other states have relatively few problems with this arrangement, EPA has observed some conflicts and challenges in Missouri because of this organizational arrangement, in addition to the delays caused in remediating LUST sites as described herein, that detract from the successful performance of the program, including the following:

[27] http://www.pstif.org/board.html
[28] Chapter 319.129.1.4 RSMo
[29] http://app.auditor.mo.gov/Repository/Press/2011-34.htm

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- PSTIF partially funds the MDNR Tanks program. PSTIF has discretion in its MDNR funding decisions. Annually, MDNR management must appear before the PSTIF board and request funding to run the state's tanks program for the upcoming fiscal year. MDNR requested funding for their upcoming fiscal year at the PSTIF September 2016 board meeting. PSTIF tabled the discussion pending the release of this report by EPA.[30] Historically, PSTIF funding has accounted for approximately 30% to 40% of the tanks program's total funding (see data presented in Appendix 19). It is a natural conflict of interest for an organization directed by a board dominated by the regulated community to determine the funding of the organization that regulates that community. Effectively, this can have a major influence on the level/quantity/degree/quality of that regulatory activity. By controlling program funding over time, PSTIF is able to exert influence on the operations, staffing, and training of MDNR.

- PSTIF directs contractors to expend cleanup insurance funds to collect site data not requested by MDNR in order to dispute MDNR's findings. Via consultant interview, EPA learned that PSTIF hired a second consultant at the Main Street Shell site to evaluate MDNR's determination (and enforcement order) that extensive characterization was still required. When that contractor reported that indeed characterization had been inadequate, they were informed their services were no longer needed. In many cases, PSTIF utilizes its organizational separation to limit or withhold information about releases or characterization from MDNR (see Appendix 1).

- PSTIF continues to be given a voice for the discussion of numerous issues that appear to be outside the limits of the statute under which it was established. This includes but is not limited to negotiations for Energy Policy Act compliance or accommodations, establishing RBCA criteria and guidance, compiling technical outreach materials, and redrafting programmatic legislation. A recent example is that PSTIF commented "on behalf of PSTIF insured tank owners and operators" on Missouri's new state UST proposed rules that would bring the state into compliance with the Energy Policy Act. Due to the organizational structure described above, MDNR appears to be unable or unwilling to restrict PSTIF's involvement in the development of standards.

- PSTIF also uses its resources and influence to further the aims of outside trade organizations. It is natural that the PSTIF board, since it consists of mostly industry representatives, would have representatives that are members of the Missouri Petroleum Marketers and Convenience Store Association (MPCA). The MPCA's stated purpose is to advance the legislative and regulatory interest of its members. It should be noted, however, that the Executive Director of PSTIF, a state employee, is also a member of the MPCA.

- MDNR and PSTIF did make an attempt to address part of the findings in the EPA's 2012 program review by developing what they termed the Dispute Resolution (DR) process. This process was a plan for the Executive Director of PSTIF and the Deputy Director of MDNR to resolve any impasse between MDNR's technical staff and the PSTIF representative. This process was utilized on a few cases. It was not utilized frequently enough to significantly reduce the large case load and backlog. Technical staff with detailed knowledge of the projects were not involved in the process. Moreover, it is EPA's understanding based on staff interviews that the resolutions were merely compromises and not necessarily based on scientific data or in accordance with state guidance.

[30] See meeting minutes

Finding: Organizational conflicts of interest, primarily the discretion the PSTIF board has in funding MDNR's tanks program, contribute to the delays in funding investigations and corrective actions at many Missouri LUST sites.

Corrective Action: Missouri must take steps to eliminate conflicts of interest, such as eliminating the discretion the PSTIF board has in funding the MDNR tank program, and using fund resources to further the aims of outside trade organizations. In addition, Missouri must increase the accountability of the PSTIF's operations to better ensure that it operates within the parameters of state laws that created it. As it is now, it is unclear to EPA to whom the PSTIF board is accountable.

MDNR suggested professional third-party evaluation of the state's UST program in 2010 and again in 2016. These suggestions were not supported by PSTIF. The EPA agrees that such an evaluation would be beneficial to the UST program.

V. Cases Highlighted

Two projects, where odor vapor complaints and threats of exposures continue, typify many of the issues described above:

Main Street Shell (R009051, R009052 & R009133)

- Three releases occurred from deficient UST systems over a year (05/01/2015, 06/10/2015 and 04/04/2016)
- The contaminant plume spans multiple city blocks and has resulted in vapor migration into residences. Complaints and reports of vapors in homes continue to be made to this day.
- The responsible party has been slow to respond to regulatory requirements. More than a year has passed since the first release was reported, and the responsible party has still not fully evaluated potential exposure routes and the degree/extent of impacts.
- The responsible party's consultant has been slow in performing the emergency response and investigation. As of the drafting of this report, despite being under an administrative order to do so, the responsible party still has not presented an acceptable remedial action plan to the MDNR.
- MDNR was slow to use its enforcement tools to compel action. It took a year for the MDNR to use its enforcement tools to get the responsible party to remove defective equipment and begin implementing corrective actions; and ultimately only did so once EPA expressed the intent to take enforcement action.
- All parties contributed to a piecemeal investigation process that fails to recognize the urgency and severity of the issues and address the problem in a holistic manner.
- PSTIF has obstructed the site investigation and cleanup of these releases by failing to fund these activities, yet at the same time funding the RP's legal defense.
- PSTIF has chosen to fund an outside attorney to challenge the MDNR cleanup requirements.

Result: Nearly a year and a half after the first release, there is a contaminant plume of indeterminate characteristics, severity, size, and risk under at least three residential city blocks, and petroleum vapors are still intermittently migrating through public utilities into people's homes.

Zill's (R008661, R008771 & R009048)

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- Three releases occurred from deficient UST systems over a decade. The earliest release (01/13/2003) was cleaned up. The latter two releases (one recorded for 12/07/2006 and another for 07/15/2015) have yet to be fully characterized or cleaned up.
- The contaminant plume spans multiple city blocks and causes vapor migration into residences. Complaints and evidence of vapors in storm sewers continue to this day.
- The responsible party has been slow to respond to regulatory responsibilities. More than a decade has gone by since the second release was reported and the responsible party has still not fully evaluated potential exposure routes and the degree/extent of impacts. MDNR was slow to use its enforcement tools to compel action. More than a decade had passed after the first release before the MDNR began actively utilizing its full array of enforcement tools.
- The responsible party's consultant was slow in performing emergency response and investigation. MDNR has had to take the lead utilizing valuable, emergency response resources.
- All parties contributed to a piecemeal investigation process that fails to recognize the urgency and severity of the issues and address the problem in a holistic manner.
- PSTIF has obstructed the site investigation and cleanup of these releases by failing to fund these activities, yet at the same time funding the RP's legal defense.
- The PSTIF has chosen to fund an outside attorney to challenge MDNR's cleanup requirements.

Result: More than a decade after the first release there is a contaminant plume of indeterminate characteristics, severity, size and risk under at least three residential city blocks, and petroleum vapors are still intermittently migrating through public utilities into people's homes.

EPA observed during interactions at these two sites that PSTIF alleges that these legal fees count toward the $1,000,000/release FR cap. This clearly contradicts both federal and state regulations.[31] PSTIF's understanding of this point is an important clarification required for SPA and re-SPA.

VI. Conclusion and Requirements

The EPA finds that while there are sufficient funds providing FR for the state of Missouri, certainty does not exist that those funds are available and financial responsibility exists for taking the corrective actions required by MDNR to protect the public health and the environment. In a program whose two entities are in conflict, arguments and delays demand more staff time thereby inefficiently utilizing state and federal funds. Therefore, EPA will require Missouri to submit a comprehensive written plan within 45 days from the issuance of this final report signed by both MDNR and PSTIF. The plan shall address, at a minimum, the elements below:

1. Clarification of authorities and responsibilities of PSTIF and MDNR such that conflicts no longer prevent funds from being available for corrective action, especially when there are direct and ongoing exposures to the human health. The plan must be backed by statutes, regulations, and/or agreements.

2. Establishment of accountability for the operation of PSTIF to ensure compliance with state law, financial responsibility, and the EPA State Program Approval.

3. Elimination of conflicts of interest that currently exist, such as the PSTIF board having discretion as to whether to fund MDNR.

[31] 40 CFR §280.93(g); 10 CSR 26-3.093

4. Addressing MDNR staffing shortfalls, especially in the geology and engineering disciplines.

5. Development of a plan for mutual training/workshops for MDNR, consultants, and the regulated community.

6. Confirmation that both agencies understand that any and all costs to PSTIF attributable to legal fees will not count against the $1,000,000/release FR cap, and confirmation that all associated documentation indicating or insinuating otherwise has been revised.

7. Commitment to and plan for utilizing compliance orders and other enforcement tools more timely and frequently, including referral of problematic cases to the Missouri AG's office or EPA for enforcement.

8. Development of a system for tracking project progress, shared by MDNR and PSTIF, to prevent lapses in follow ups and project progression. This system must include viable enforcement triggers/actions and contingencies for addressing particularly vulnerable time periods such as management/regulatory transitions. The EPA suggests that an elaboration or combination of the MDNR tanks database, the recently implemented activity tracking system, and/or the PSTIF electronic diary would be a good start. The system must be completely accessible to all state agencies and the EPA.

9. Streamlining of the submittal, review, and approval process for reviewing and approving work proposed for LUST sites and adopting/advocating a large scale, holistic and flexible approach to contracting, performing and completing the investigation and clean-up of LUST sites (non-piecemeal approach). The process must be flexible enough to accommodate the quality and quantity of work necessary to move the project along in a timely manner. There are a number of processes that have been utilized in other states that can accommodate this criteria (i.e., pay for performance).

10. The written plan must include a statement that indicates what accommodations Missouri will make to adjust the annual program review schedule to focus on the corrective action program component until further notice.

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