



**Missouri Department of Natural Resources
Regulatory Impact Report
In Preparation For Proposing
Amendments of Underground Storage Tank rules
10 CSR 20-10.010 to 10.050, 10.070 to 10.074**

Division/Program: Division of Environmental Quality/Hazardous Waste Program

Rule number: 10 CSR 20 Chapter 10

Rule Title: Underground Storage Tanks – Technical Regulations

Type of rule action: Amendments

Nature of the rulemaking: Affects environmental conditions and prescribes environmental standards for operation of underground storage tanks

Approval of the Completed Regulatory Impact Report

Program Director

Date

Missouri Department of Natural Resources
Regulatory Impact Report
In Preparation For Proposing
Amendments of Underground Storage Tank rules
10 CSR 20-10.010 to 10.050, 10.070 to 10.074

Applicability: Pursuant to Section 640.015 RSMo, “all rulemakings that prescribe environmental conditions or standards promulgated by the Department of Natural Resources...shall... be based on the regulatory impact report...” This requirement shall not apply to emergency rulemakings pursuant to section 536.025 or to rules of other applicable federal agencies adopted by the Department “without variance.”

Determination: The Missouri Department of Natural Resources has determined this rulemaking prescribes environmental conditions or standards and verifies that this rulemaking is not a simple unvarying adoption of rules from other federal agencies. Accordingly, the Department has produced this regulatory impact report which will be made publicly available for comment for a period of at least 60 days. Upon completion of the comment period, official responses will be developed and made available on the agency web page prior to filing the proposed rulemaking with the Secretary of State. Contact information is at the end of this regulatory impact report.

1. Describe the environmental conditions or standards being prescribed.

Title 10, Division 20 of the Code of State Regulations contains operational requirements for underground storage tanks and underground storage tank (UST) facilities. The requirements include registration, financial responsibility, leak detection, cathodic protection, release response and closure. The current state regulations were established in 1990 in response to and mirroring the federal regulations, which were enacted in 1988, and most have not been updated since. As such, many of the regulations do not reflect current equipment, testing methods, manufacturers’ requirements, industry standards and recommended practices. The amendments proposed as part of this rulemaking will update the current requirements to reflect these new standards and practices. In addition, many of these regulations are not as specific as they could be and in some cases they are ambiguous leaving room for more than one interpretation. Over the years we have addressed these issues through regulatory determinations, but amending the language of the rule will result in more definitive language that leaves less room for ambiguity, confusion and interpretation.

In addition to clarifying and updating existing rules, new rules will be proposed as well. The new requirements would apply to emergency generator USTs, installers of USTs and UST systems, and tanks in temporary closure. These changes will help prevent releases of product to the environment from underground storage tank systems, provide better release detection should a leak occur, and require removal of storage tank systems that pose the greatest risk to the environment. Changes will also help ensure that the installation of new underground storage tank systems are done properly and by trained, insured installers. Currently, hazardous substance tanks are exempt from the financial responsibility requirements. Another proposed change is to require owners and operators of hazardous substance tanks to

provide proof of financial responsibility to ensure that they can address a release, should one occur.

2. A report on the peer-reviewed scientific data used to commence the rulemaking process.

While our regulations incorporate by reference nineteen (19) different industry standards and recommended practices, there are over eighty-five (85) industry standards and recommended practices that apply to underground storage tanks. Since development of the original regulations, all of these industry standards and recommended practices have been updated to include new equipment, new testing procedures, new release data, and other specifications. These standards and practices are developed by nationally recognized associations comprised of experts in this field, including NACE International (National Association of Corrosion Engineers), American Petroleum Institute, Petroleum Equipment Institute, Underwriters' Laboratories, and the American Society for Testing and Materials (ASTM). The regulatory changes proposed are based on changes to equipment, procedures, test methods, standards, specifications and certifications developed by these organizations.

3. A description of the persons who will most likely be affected by the proposed rule, including persons that will bear the costs of the proposed rule and persons that will benefit from the proposed rule.

The requirements will apply to the tank owners, operators, their contractors, and tank installers. These owners, operators and contractors include small business owners, large business owners, non-profit organizations, hospitals and other care facilities, school districts, universities, airports, local, state, and federal governments, including military facilities. There are almost 3,600 regulated underground storage tank facilities throughout the state, with over 1,700 different owners.

4. A description of the environmental and economic costs and benefits of the proposed rule.

The rulemaking will primarily focus on clarifying existing regulations, ensuring that the requirements are clear to the regulated community.

The current regulations were based on the federal regulations from 1988. In the past twenty years the technology of the available equipment has advanced and common weaknesses with old equipment have been found. Furthermore, the original regulations were designed to prevent leaks from tanks and their associated piping. Those original regulations appear to have been successful, as the tanks are rarely the source of modern leaks. Fittings, connectors, unions and valves are more common sources of leaks today. As such, these regulation changes are designed to either reduce the likelihood of equipment failure or to ensure that a leak is detected promptly, should one occur. The department assumes that this will result in an environmental benefit based on fewer releases of petroleum to the environment. Additional specific information on the environmental and economic costs and benefits of specific changes is addressed below.

Temporary closure requirements

One of the proposed changes applies to out of service tanks and is intended to reduce the likelihood that an operating tank facility will be abandoned, thereby becoming a blight in the community and an environmental liability. The original regulations forced replacement or upgrade of old steel tanks, but allowed newer tank systems to remain in the ground indefinitely. Today, the problem is that “temporarily” closed tanks may remain in the ground indefinitely, without consideration for whether the tank, piping, fittings and other equipment have become compromised. Some of the proposed regulation changes address these tanks that are not in use, specifically those where the owner has no intention of re-opening. The proposed change would require the owner/operator of an out-of-use UST system that does not re-open within one year to either: (a) permanently close the tank or (b) determine if a release has occurred. Flexibility is allowed for newer tank systems if the owner/operator purchases an extension of time from his financial responsibility mechanism provider so he/she will still have money available for a cleanup, should one be required. The estimated cost for Option (b), a limited site assessment, is approximately \$5,000 to \$11,000. This is not a new cost triggered by the proposed rules; rather, it is a cost that may, in some cases, be incurred sooner under the proposed rules than under current rules.

In some cases, this proposed change will *reduce* the owner’s cost of cleanup by assuring that he/she conducts a site assessment before the opportunity to make a claim with his/her financial responsibility provider expires.

The environmental benefits of this particular proposed change include removal or closure of tanks that represent potential releases, as well as earlier detection of contamination, which may help ensure that contamination is addressed before impacting neighboring properties. Economic benefits include better marketability and redevelopment opportunities for sites with temporarily closed tanks.

Testing requirements for lined tanks

A second important change involves older steel tanks which were upgraded more than ten years ago with an interior lining. One concern with interior linings is that, while the inside of the tank may be protected, the steel shell of the tank in contact with the soil may corrode, which can lead to holes in the steel tank, which can compromise the entire tank structure. The proposed change would require an integrity test of the steel tank itself anytime a lining must be repaired or replaced; linings are tested every five years. While this is already required by the most commonly used applicable industry standard, and therefore is likely already an incurred cost, this proposed integrity test requirement potentially costs approximately \$1500 per tank.

Monitoring requirements for high throughput facilities – 10 CSR 26-2.041(2)

The third proposed change is to change the monitoring requirements for high throughput facilities. Many facilities, like truck stops and trucking locations, have tank systems that rarely, if ever, stop running. While the regulations establish approved methods for checking

a tank system monthly for leaks, many of these methods are not adequate for these facilities. As such, the department is proposing to require these facilities to use a leak detection method that is appropriate for facilities that have high throughputs. While many of these facilities already use an appropriate method, for the remaining facilities, the least expensive way to comply with this proposed new requirement would cost approximately \$25 per month per tank.

Emergency generator UST requirements – 10 CSR 26-2.010(4)

The fourth proposed change is to require monthly monitoring for tanks that store fuel for emergency generator use. Under the current regulations, tanks that store fuel for emergency generators are not required to monitor their tanks for leaks, even though the tanks, piping, and equipment are typically the same equipment found at a gas station. The proposed change would resolve this inequitable application of the release detection requirement. Based on information submitted to the department, more than 92% of facilities with emergency generator fuel storage tanks already document compliance with these requirements. The remaining 8% may actually comply, as well, but did not report these measures as it is not currently required that they do so. The cost of compliance with this requirement may range anywhere from \$15 per month for a monthly service to, on average, \$9,000- \$15,000 to purchase an electronic monitoring system. The benefit, though, is both economic and environmental; if these tanks are not monitored, a leak may go undetected, thereby leading to more contamination. More contamination means more potential for environmental harm, impacts to human health, structures, wells, and a more costly cleanup.

Installation requirements – 10 CSR 26-2.019

Underground storage tanks, piping, and other equipment have improved dramatically since 1990. While the hardware has all been engineered to be more durable, more flexible, and to prevent releases, any equipment can be damaged during installation. Thus, installation practices are specifically defined both in industry standards and in manufacturers' installation requirements. These required installation practices are based on equipment-specific engineering, material strength and weaknesses. Some of the proposed regulations are designed to ensure that installers are properly trained, and that the installation requirements are clearer, and that the people who are required to demonstrate that they are experienced and knowledgeable on installation protocols are the persons who are responsible for assuring that the installation is done correctly.

Environmental benefits include better installations and, therefore, fewer releases. Economic benefits include reduction of liability for UST owners and operators. Except for one new requirement that new systems have containment sumps, the remainder of the changes are just clarification of existing standards for which the department does not anticipate any impact on the cost of installations. Although a new requirement, the additional cost of the containment sumps during an entire system installation is negligible.

Financial Responsibility requirements – 10 CSR 26-3.090 - 10 CSR 26-3.115.

Under the current regulations, only petroleum tank owners are required to demonstrate financial responsibility for addressing a release from their UST system. One proposed change is to require owners of hazardous substance tanks to meet the same requirements for financial responsibility. Just like tanks that store petroleum, hazardous substance storage tanks, despite the owner's best efforts, may leak. As such, it is imperative that owners have a mechanism on file that can ensure funds are available to address any release. At this time, there are only 20 hazardous substance tank facilities. Many of those are large corporations, most likely able to provide documentation of self-insurance. As such, the only cost would be the submittal of the documentation. For some of these facilities, their current insurance policies may meet the criteria for documentation of financial responsibility. For any remaining sites that might require an insurance policy, the cost of an insurance policy to meet the standards has been estimated to be from \$500 to \$3,000 per year, depending on the number of tanks at the facility, the age of the tanks, and the materials stored.

5. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenue.

As most of these proposed changes are cleanups and clarifications and, therefore, do not affect the procedures of the department or the regulated community, the cost impact to the department and other agencies should be negligible. For the financial responsibility requirements, oversight costs for the department should be negligible as the department already requires this documentation for active petroleum UST facilities.

For the changes to installer liability, the cost burden to the department will be determined by the amount of oversight that the installers request. As currently proposed, the only change the department would need to make for the installation requirements is a system to track the limited number of installers (at this time, there are only about 25 installers, which the department already tracks in a simplistic spreadsheet).

For the changes concerning tanks taken out of use, the department would expect to see tank closures done sooner in some cases. A unit within the Tanks Section, though, already exists to provide oversight of these closures.

The PSTIF has reviewed the proposed changes and concluded its fiscal impact from the proposed changes will be negligible.

6. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction, which includes both economic and environmental costs and benefits.

Temporary closure requirements

If we do nothing, temporarily closed tanks will continue to be able to be in temporary closure status indefinitely, even though there is no possibility that the tanks will ever be used again. These tanks are a potential environmental problem as long as they remain in the ground without being properly closed, which includes an assessment of whether a release has occurred. In addition, these abandoned or facilities will continue to mar neighborhoods and city blocks as redevelopment of these sites, with tanks still in place and contamination unknown, is typically problematic. By requiring these sites to be sampled and these tanks to close, we eliminate that uncertainty, identify potential problems, and are able to address any threats these tanks might represent.

Release detection requirements for emergency generator tanks and high throughput facilities

The cost of these changes may vary widely based on equipment already in place at the facility and what options the owner selects. The options for compliance vary widely: less costly methods with more owner responsibility or more costly methods, but with everything electronic and simpler for the owner. The benefit, though, is both economic and environmental; if these tanks are not monitored, a leak may go undetected, thereby leading to more contamination. A lack of action will likely lead to more contamination which means more potential for environmental harm, impacts to human health, structures, wells, and costly cleanups.

Installation requirements – 10 CSR 26-2.019

If we do nothing, owners/operators will still be responsible, resulting in more errors and less certainty that potential problems will be identified and resolved. As this requirement does not change the actual work that is currently required for the compliant installers currently in the field, and as it merely clarifies the requirements and shifts the responsibility, the anticipated economic benefit is that the standards will be clear and equitable for all installers and that owners will be able to see the certifications and work history of potential installers. Economic impact because these regulations should prevent sub-par, untrained companies that are unfamiliar with the tank industry from doing inadequate work that may lead to potential releases and more expenditures to clean up contaminated sites. Environmental benefits because installers who are not installing tanks properly will be more easily identified, which will help reduce the number of improper installations.

Financial Responsibility requirements – 10 CSR 26-3.090 - 10 CSR 26-3.115.

If a release occurs from an underground storage tank storing a hazardous substance, the owner and operator are already responsible for the cleanup of that material. As such, facilities should already be ensuring that they can afford to cleanup a release, should one occur. Since most of these facilities likely already meet the requirements, the cost is minimal. If no changes are made, though, a release could occur from a facility that does not have a financial responsibility mechanism in place and would likely lead to more contamination, more potential for environmental harm, impacts to human health, structures, wells.

7. A determination of whether there are less costly or less intrusive methods for achieving the proposed rule.

The proposed changes provide flexibility for owners and operators. The changes to the release detection options for high throughput facilities still allow an owner or operator to choose from multiple methods, which provides some flexibility on the expenses incurred. For emergency generator facilities, the owners may select any applicable method, which may range from \$20 to \$15,000, depending on the owner's preferences. The owner may opt for the more cost effective changes.

For the temporary and permanent closure requirements, the proposed changes may allow more flexibility for the owners and operators. The requirement would result in some of those expenses being incurred sooner than the original regulations, but the intent is to find potential problems while the site is most likely still claim eligible through the state fund or private insurance. So while the costs may be incurred sooner, they are not necessarily higher. In addition, if the site is abandoned, but a claim has already been filed, the site may be addressed with insurance funds, thereby benefitting the entire community. The proposed changes included the less costly options that were suggested by the regulated community. The only other alternative, which would have no cost impact, would be to take no action and allow these facilities to remain out of use without any assessment of potential contamination or the risk it poses.

8. A description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the department and the reasons why they were rejected in favor of the proposed rule.

Due to the extensive discussions with and feedback from tank owners, operators, contractors and representatives, many different suggestion have been considered. The proposed rule reflects ideas submitted from these entities to allow more flexibility and more cost effective resolutions. In addition, some of the original proposals have been removed completely, due to cost concerns, long term maintenance and discussions on the tangible benefits of the proposals.

One proposed change was to require all tanks that are temporarily closed for more than twelve months to permanently close. The alternative language now incorporated allows an owner to check the site for a release, and then leave the tanks open longer to allow more flexibility. The original suggestion provided a permanent, but more costly solution. The department reviewed both options and selected the option that had the most flexibility for the owners for both cost and future use, while still ensuring that the environmental and redevelopment concerns were addressed.

The department considered removing groundwater and vapor monitoring as options for release detection. This proposal was removed due to concerns with cost impacts and lack of alternatives.

9. An analysis of both short-term and long-term consequences of the proposed rule.

Temporary closure requirements

The short-term consequences of the proposed changes to temporarily closure requirements include an increased number of permanent closures and/or site assessments that determine if a release has occurred. The long-term consequences include fewer sites in temporarily closure status and fewer abandoned and empty properties.

Release detection requirements for emergency generator tanks and high throughput facilities

The short-term consequences of the proposed changes to release detection requirements may include a requirement that owners learn more about a new method of release detection and could potentially include the costs of installing new equipment. The long-term consequences include the detection of releases at sites that were using inappropriate release detection or none at all. Early detection of a release means an early response and less product into the environment.

Installation requirements – 10 CSR 26-2.019

The short-term consequences of the proposed change to hold tank installers responsible for tank installation may include a decreased number of installers engaged in the business of tank installations. The department assumes that companies that are not regularly involved in the petroleum or underground storage tank industry may choose not to engage in the tank installation business or, alternatively, may choose not to bid for side jobs involving tank installations. Another consequence is that any company wanting to start petroleum related work will have a much clearer description of the department's expectations and requirements. The department assumes that this will result in better tank installations and fewer overall releases.

Financial Responsibility requirements – 10 CSR 26-3.090 - 10 CSR 26-3.115.

The short-term and long-term consequences are that we should have fewer releases that are not addressed due to financial problems. If a facility has adequately documented compliance with this requirement, the resources should be available to address any release and associated contamination.

10. An explanation of the risks to human health, public welfare or the environment addressed by the proposed rule.

Release detection requirements for emergency generator tanks and high throughput facilities

If these tanks are not properly monitored, a leak may go undetected, thereby leading to more contamination. Early detection of a release means an early response and less product into the environment.

Installation requirements – 10 CSR 26-2.019

Improperly installed tanks and temporarily closed tanks are a risk to human health or the environment because of the potential for releases and/or petroleum contamination impact to the environment, neighboring structures, and the individuals that may work or reside therein. Improper or no monitoring of an underground storage tank can allow a leak to go undetected, increasing the amount of product released into the environment and increasing the likelihood that the contamination may cause harm to the environment, water wells, lakes, streams, nearby structures and the individuals therein.

Financial Responsibility requirements – 10 CSR 26-3.090 - 10 CSR 26-3.115.

The short-term and long-term consequences are that we should have fewer releases that are not addressed due to financial problems. If a facility has adequately documented compliance with this requirement, the resources should be available to address any release and associated contamination.

11. The identification of the sources of scientific information used in evaluating the risk and a summary of such information

While our regulations incorporate by reference nineteen (19) different industry standards and recommended practices, there are over eighty-five (85) industry standards and recommended practices that apply to underground storage tanks. Since the original development of the regulations, all of these industry standards and recommended practices have been updated to include new equipment, new testing procedures, new release data, and other specifications. These standards and practices are developed by nationally recognized associations comprised of experts in this field, including NACE International (National Association of Corrosion Engineers), American Petroleum Institute, Petroleum Equipment Institute, Underwriters' Laboratories, and the American Society for Testing and Materials (ASTM). The regulatory changes proposed are based on changes to equipment, procedures, test methods, standards, specifications and certifications developed by these organizations.

12. A description and impact statement of any uncertainties and assumptions made in conducting the analysis on the resulting risk estimate.

Temporary closure requirements

It is assumed that conducting site assessments earlier will help ensure that contamination is addressed before it impacts other sites and make it easier to identify and locate responsible parties to address any contamination found.

Release detection requirements for emergency generator tanks and high throughput facilities

It is assumed that more and better monitoring will not only detect more leaks, but detect them earlier.

Installation requirements – 10 CSR 26-2.019

It is assumed that proper training on installation procedures and specifications result in better installations of underground storage tanks, piping and equipment and that better installations will result in fewer leaks.

13. A description of any significant countervailing risks that may be caused by the proposed rule

As most of these requirements already exist, and the proposed changes primarily shift liability and timeframes, no significant countervailing risks have been identified.

14. The identification of at least one, if any, alternative regulatory approaches that will produce comparable human health, public welfare or environmental outcomes.

As an alternative to the new installation requirements, a certification program for installers would also address many of the concerns with problematic installations, uninsured or unskilled installers, but would create a financial burden on the state agency that cannot be offset at this time with the current budget allocations.

As an alternative to the proposed requirements for temporarily closed tanks, the department could require all tanks in temporary closure longer than twelve months to permanently close. This requirement would ensure that all tanks are addressed shortly after being taken out of use, would necessitate an evaluation of any contamination, and would leave a clean site that could be more easily redeveloped, but would also create a larger financial burden on tank owners, with much less flexibility for re-use or sale of the facility.

15. Provide information on how to provide comments on the Regulatory Impact Report during the 60-day period before the proposed rule is filed with the Secretary of State

Comments may be submitted by electronic mail to Tim Eiken, Rule Coordinator of the Hazardous Waste Program at tim.eiken@dnr.mo.gov, or submitted by mail to:

Tim Eiken, Rule Coordinator
Missouri Department of Natural Resources
Hazardous Waste Program
P.O. Box 176
Jefferson City, MO 65102-0176

In your email or letter, please mention that the comments are on the Regulatory Impact Report for the rulemaking on Underground Storage Tanks – Technical Regulations. It is also helpful if the comments are directed to specific portions of the report.

16. Provide information on how to request a copy of comments or the web information where the comments will be located.

Information related to this proposed rulemaking and regulatory impact report, including comments on the RIR, will be posted on the web at:

<http://dnr.mo.gov/env/hwp/rules-dev-hwp.htm>

This site will be updated and expanded as the rulemaking effort progresses. If you would like to receive information and updates from the department on the status of this rulemaking, please contact Heather Peters at the department's Hazardous Waste Program at 800-361-4827 or 573-751-7877 or by email at heather.peters@dnr.mo.gov. If you have any questions about technical regulations for underground storage tanks, please contact Heather Peters at the department's Hazardous Waste Program at 800-361-4827 or 573-751-7877 or by email at heather.peters@dnr.mo.gov