
Rules of
Department of Natural Resources
Division 20—Clean Water Commission
Chapter 15—Aboveground Storage Tanks—Release
Response

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**Title 10—DEPARTMENT OF
NATURAL RESOURCES**

**Division 20—Clean Water Commission
Chapter 15—Aboveground Storage
Tanks—Release Response**

10 CSR 20-15.010 Applicability and Definitions

PURPOSE: The Missouri Clean Water Commission is responsible for adopting rules necessary to prevent, control and abate potential discharge of contaminants to the waters of the state. Releases of petroleum and other regulated substances from aboveground storage tanks and associated piping, primarily from ASTs located at service stations, marinas, bulk plants, and fleet fueling facilities, have been documented throughout the state. While the applicable Department of Agriculture regulations focus on prevention of such releases, there are currently no specific requirements for release response measures that must be taken to protect the environment and the waters of the state. The commission has determined release response measures to be necessary because, once a release has occurred, the nature of the contaminants is such that, without appropriate release response measures, there is a substantial threat that the discharged contaminants will pollute the waters of the state. The intent of the release response measures required by the rules in this chapter is to prevent any discharged contaminants from polluting the waters of the state. This rule specifies which aboveground storage tanks must comply with the technical requirements set forth in this chapter and defines specific words used in this chapter so that the meaning of these terms, and their application in the rules of this chapter, is easily understood.

(1) The requirements in this chapter apply to the owner or operator of any facility on which one (1) or more aboveground storage tanks (AST), as the term is defined in this rule, is located.

(2) "Aboveground storage tank (AST)" or "AST System" means any one (1) or a combination of tanks, including pipes connected thereto, used to contain an accumulation of regulated substances and the volume of which, including the volume of the aboveground pipes connected thereto, is more than ninety percent (90%) above the surface of the ground, and is utilized for the sale of products regulated by Chapter 414, RSMo. The term does not include those tanks listed below or aboveground storage tanks at petroleum

pipeline terminals. The following are not considered aboveground storage tanks:

(A) Underground storage tanks (USTs) as defined in 319.100, RSMo;

(B) Farm or residential tanks, regardless of size, used for storing motor fuel for noncommercial purposes;

(C) Tanks used for storing heating oil for consumptive use on the premises where stored;

(D) Septic tanks;

(E) Pipeline facilities, including gathering lines, regulated under:

1. The federal Natural Gas Pipeline Safety Act of 1968 (P.L. 90-481), as amended; or

2. The federal Hazardous Liquid Pipeline Act of 1979 (P.L. 96-129), as amended;

(F) Pipeline facilities regulated under state laws comparable to the provisions of law referred to in subsection (E) of this section;

(G) Surface impoundments, pits, ponds, or lagoons;

(H) Storm water or waste water collection systems;

(I) Flow-through process tanks;

(J) Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

(K) Storage tanks situated in an underground area, such as a basement, cellar, mineworking, drift, shaft, or tunnel, if the storage tank is situated upon or above the surface of the floor; and

(L) Transformers, circuit breakers or other equipment or machinery that contain regulated substances for operational purposes.

(3) "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

(4) "Department," unless otherwise stated, means the Missouri Department of Natural Resources.

(5) "Free product" refers to a regulated substance that is present as a non-aqueous phase liquid (for example, pools of regulated substances at the surface or perched in the subsurface on top of an impermeable rock stratum or on top of groundwater).

(6) "Pipe" or "piping" means a hollow cylinder or tubular conduit constructed of non-earthen materials.

(7) "Regulated substance" means:

(A) "Petroleum," which is crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (sixty

degrees Fahrenheit (60°F) and 14.7 pounds per square inch absolute); or

(B) Other substances stored and approved for use as an alternative motor vehicle fuel by the United States Environmental Protection Agency, the Missouri Department of Agriculture, or the Missouri Department of Natural Resources, including, but not limited to:

1. Nonpetroleum or petroleum/non-petroleum blended fuels such as biomass fuels, soydiesel or other biodiesels;

2. Neat alcohols (such as ethanol or methanol);

3. Alcohol-blended fuels;

4. Innovative or advanced technology petroleum fuels that are liquid at standard conditions of temperature or pressure (sixty degrees Fahrenheit (60°F) and 14.7 pounds per square inch absolute).

(8) "Release" includes, but is not limited to, any spilling, leaking, emitting, discharging, escaping, leaching, or disposing of regulated substances from an AST onto the ground surface or into groundwater, surface water, or subsurface soils.

(A) A release is "confirmed," for purposes of the rules in this chapter, upon discovery or observation of regulated substances on the ground surface or in groundwater, surface water, or subsurface soils.

(B) A release is "suspected," for purposes of the rules in this chapter, anytime there is any indication of the presence of regulated substances on the ground surface or in groundwater, surface water, or subsurface soils. Factors indicating the presence of regulated substances in the environment include, but are not limited to, erratic behavior of dispensing equipment, unexplained loss of product, notification by a third party of a potential release, or some reason other than discovery or observation of environmental contamination.

(9) "Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (for example, concrete, steel, or fiberglass-reinforced plastic) that provide structural support.

AUTHORITY: sections 319.137 and 644.026, RSMo 2000. Original rule filed Sept. 13, 2001, effective May 30, 2002.*

**Original authority: 319.137, RSMo 1989, amended 1993, 1995; and 644.026, RSMo 1972, amended 1973, 1987, 1993, 1995, 2000.*

10 CSR 20-15.020 Release Reporting and Initial Release Response Measures

PURPOSE: The Missouri Clean Water Commission is responsible for adopting rules necessary to prevent, control and abate potential discharge of contaminants to the waters of the state. Releases of petroleum and other regulated substances from aboveground storage tanks and associated piping, primarily from ASTs located at service stations, marinas, bulk plants, and fleet fueling facilities, have been documented throughout the state. While the applicable Department of Agriculture regulations focus on prevention of such releases, there are currently no specific requirements for release response measures that must be taken to protect the environment and the waters of the state. The commission has determined release response measures to be necessary because, once a release has occurred, the nature of the contaminants is such that, without appropriate release response measures, there is a substantial threat that the discharged contaminants will pollute the waters of the state. The intent of the release response measures required by the rules in this chapter is to prevent any discharged contaminants from polluting the waters of the state. Specifically, this rule establishes procedures for reporting suspected releases, responding to releases and the subsequent steps necessary to ensure that a release is properly investigated and cleaned up. This rule also describes the first steps that shall be taken to abate or stop the spread of contaminants, mitigate and determine the extent of the release, and requires spilled free product to be collected and removed from the environment immediately. The rule further establishes requirements for verification of a release, and for conducting off-site investigations following reported or suspected releases if off-site migration is suspected.

(1) Reporting Releases and Suspected Releases. Unless otherwise provided in this rule, owners and operators of aboveground storage tanks (ASTs) shall report any suspected or confirmed release of a regulated substance to the Department of Natural Resources' Emergency Spill Line at (573) 634-2436 at the earliest practical moment within twenty-four (24) hours of discovery of the suspected or confirmed release. Immediately upon the discovery or observation of regulated substances on the ground surface or in groundwater, surface water, or subsurface soils, the owner or operator shall complete the following:

(A) The initial release response measures described in section (7) of this rule;

(B) If necessary, the free product recovery measures described in section (8) of this rule.

(2) System Test. For any suspected release that has not been confirmed by discovery or observation of regulated substances on the ground surface or in groundwater, surface water, or subsurface soils, the owner or operator of the AST shall take measures as necessary to determine whether a leak exists in either any portion of the tank or piping that routinely contains product or in the attached delivery piping, or in both. Measures that satisfy this requirement include, but are not limited to, hydrostatic testing of the AST system in accordance with API Standard 650, F-4 to F-7.6, air testing of the AST system, or a visual inspection of the tank bottom.

(A) Upon confirmation of a release, the owner or operator of the AST shall initiate the initial release response actions described in section (7) of this rule.

(B) If it is determined that no release has occurred, and there is no other indication of regulated substances on the ground surface or in groundwater, surface water, or subsurface soil, further investigation is not required.

(3) Exceptions. Following are exceptions to the requirement to report any suspected or confirmed release of a regulated substance to the environment.

(A) No further action is necessary for any release or spill of twenty-five (25) gallons or less, provided the release or spill is immediately contained and cleaned up.

(B) No further action is necessary for any release or spill that is completely contained within secondary containment structures, provided the secondary containment structure is functionally liquid-tight, and has the ability to contain any released product until the release or spill is cleaned up.

(4) Presumption of Release. A release is presumed upon discovery or observation by any person of the presence of regulated substances on the ground surface or in groundwater, surface water, or subsurface soil, or any indication that a release to the environment has occurred at the AST site or in the surrounding area. Examples include the presence of free product or vapors in soils, basements, sewer lines, utility lines and nearby surface or drinking water.

(5) Investigation Due To Off-Site Impacts. The department may require an owner or operator of an AST to measure for the presence of contamination as described in subsection (7)(E) of this rule when, in the judgment of the department, it is necessary to establish whether an AST is the source of

off-site contamination. The department's judgment shall be based upon documented physical evidence of a release at the AST site, including, but not limited to, the discovery of free product or vapors in soils, basements, sewer lines, utility lines or nearby surface waters or drinking water supplies.

(6) Investigation Due to Closure.

(A) Upon closure of an AST in accordance with applicable rules of the Department of Agriculture, the department may require an owner or operator of an AST to measure for the presence of contamination as described in subsection (7)(E) of this rule when, in the judgment of the department, it is necessary to establish whether there has previously been a release at the former AST site or to establish whether potential contamination from any buried piping left in place poses a current or potential threat to cause pollution to waters of the state. The department's judgment shall be based upon documented physical evidence of a release at the AST site, including, but not limited to, the discovery of free product or vapors in soils, basements, sewer lines, utility lines or nearby surface waters or drinking water supplies.

(B) The department may require the owner or operator of an AST permanently closed prior to the effective date of this rule to measure for the presence of contamination at the former tank site if, in the judgment of the department, releases from the AST and/or its buried piping pose a current or potential threat to cause pollution to the waters of the state. The department's judgment shall be based upon documented physical evidence of a release at the former AST site, including, but not limited to, the discovery of free product or vapors in soils, basements, sewer lines, utility lines or nearby surface waters or drinking water supplies.

(7) Initial Release Response Measures. Owners or operators of ASTs shall:

(A) Remove as much of the regulated substances from the AST as is necessary to prevent further release to the environment;

(B) Visually inspect any released substances and prevent further migration of the release into surrounding soils and groundwater;

(C) Monitor and mitigate any environmental hazards posed by vapors or free product that have migrated from the AST site and entered subsurface structures such as sewers, basements or subsurface utility conduits or trenches;

(D) Remedy hazards posed by excavated or exposed contaminated soils that result from

initial release response activities. Any treatment or disposal of contaminated soils shall be in compliance with applicable state and local requirements;

(E) Collect and analyze at least one (1) soil or groundwater sample as necessary to establish the presence of contamination. The sample(s) must be collected in a location where contamination is most likely to be present at the AST site. In selecting the location of the sample(s), the owner or operator shall consider the nature of the stored substance, the type of backfill around the release if outside the secondary containment, or the secondary containment if the secondary containment is not constructed of impermeable material, depth to groundwater, and all other factors appropriate for identifying the presence and source of the release; and

(F) Investigate the site to determine whether free product is present. If free product is present, then free product removal activities shall begin immediately.

(8) Free Product Removal. The owner or operator of the AST shall immediately remove as much free product as practicable. Any actions initiated or required under this section shall be continued until the department determines otherwise, except that changes to free product recovery effects may be instituted without prior approval provided that the department is notified in writing of the intended changes at least five (5) days in advance of the proposed implementation date. The department may modify or deny the request as necessary. Upon discovery of free product, the owner or operator shall, at a minimum:

(A) Remove free product to minimize the spread of contamination into previously uncontaminated zones. The recovery and disposal techniques shall be appropriate to the hydrogeologic conditions at the site. Recovered by-products shall be treated, discharged or disposed of in compliance with applicable local, state and federal regulations;

(B) Use abatement of free product migration as a minimum objective for free product removal;

(C) Handle all flammable products and/or wastes in a safe manner to prevent fires or explosions;

(D) Include information about free product recovery in the report submitted to the department, as required by section (9) of this rule. The report shall provide at least the following information:

1. The name of the person(s) responsible for implementing the free product removal measures;

2. The estimated quantity, type and thickness of free product observed or measured in wells, boreholes and excavations;

3. The type of free product recovery system used;

4. Whether any discharge will take place on-site or off-site during the recovery operation and the location of this discharge;

5. The type of treatment applied to, and the effluent quality expected from, any discharge;

6. The steps that have been or are being taken to obtain necessary permits for any discharge;

7. The quantity and disposition of the recovered free product; and

8. The location and the appearance of the free product; and

(E) Upon completion of the activities required by this section, the owner or operator of the AST shall continue with the initial release response measures described in section (7) of this rule.

(9) Written Report. The owner or operator of the AST shall submit a written report on all activities required by this rule to the department within thirty (30) days of the date of discovery of the release. The report shall demonstrate compliance with all applicable requirements of this rule. Upon request, the department may allow another reasonable period of time for submission of the report. Upon review of this report, the department will determine whether the owner or operator must conduct a site characterization, as described in 10 CSR 20-15.030. If, in the judgment of the department, the information in the report is insufficient to adequately make this determination, the department may request additional information.

AUTHORITY: sections 319.137 and 644.026, RSMo 2000. Original rule filed Sept. 13, 2001, effective May 30, 2002.*

**Original authority: 319.137, RSMo 1989, amended 1993, 1995; and 644.026, RSMo 1972, amended 1973, 1987, 1993, 1995, 2000.*

10 CSR 20-15.030 Site Characterization and Corrective Action

PURPOSE: The Missouri Clean Water Commission is responsible for adopting rules necessary to prevent, control and abate potential discharge of contaminants to the waters of the state. Releases of petroleum and other regulated substances from aboveground storage tanks and associated piping, primarily from ASTs located at service stations, marinas, bulk plants, and fleet fueling facilities, have been documented throughout the state. While

the applicable Department of Agriculture regulations focus on prevention of such releases, there are currently no specific requirements for release response measures that must be taken to protect the environment and the waters of the state. The commission has determined release response measures to be necessary because, once a release has occurred, the nature of the contaminants is such that, without appropriate release response measures, there is a substantial threat that the discharged contaminants will pollute the waters of the state. The intent of the release response measures required by the rules in this chapter is to prevent any discharged contaminants from polluting the waters of the state. Further, this rule specifies the procedures for soil and groundwater investigations or characterization of the release at the site, and lists the requirements for corrective action plans for cleanup of releases from aboveground storage tank sites. In addition, this rule specifies the type of information required to be submitted by the owner or operator to the department, upon completion of these phases of activities.

(1) Site Characterization.

(A) At the request of the department in response to a release, the owner or operator of an AST shall conduct a site characterization to include a full investigation 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 contamination in the groundwater if the Initial Release Response Report submitted in compliance with 10 CSR 20-15.020 documents any of the following:

1. Contaminated groundwater or surface water above action levels;
2. Contaminated soils above action levels;
3. Presence of free product; or
4. Some other characteristic determined by the department to require further investigation because of its potential to result in pollution of the waters of the state or a potential threat to human health and the environment.

(B) An owner or operator of an AST shall follow a written procedure for conducting the site characterization of the release site. The department's Site Characterization Guidance Document may be used as a written procedure. Other written procedures may be used with prior written approval from the department.

(2) Site Characterization Reporting. A site characterization shall include, at a minimum, information about the site and the nature of



the release. The site characterization report containing this information shall be submitted to the department within forty-five (45) days of date of the department's request to conduct site characterization in subsection (1)(A) of this rule. The department may approve an alternative reporting schedule. This information shall include, but is not limited to, the following:

(A) Data regarding the type of product released and an estimate of the quantity;

(B) Data from available sources or site investigations concerning the following factors:

1. Surrounding land use;
2. The hydrogeologic characteristics of the site and the surrounding area;
3. Use and approximate locations of wells affected or potentially affected by the release;
4. Surface and subsurface soil conditions at the site and the immediate surrounding area;
5. Locations of subsurface utilities;
6. The proximity, quality, and current and potential future uses of nearby surface and ground water; and
7. The potential effects of residual contamination on nearby surface and ground water; and
8. Any additional relevant information assembled while carrying out the steps required in 10 CSR 20-15.020 and this rule.

(3) Corrective Action. Based upon the results of the site characterization, the owner or operator of the AST may be required to submit to the department a plan for corrective action that provides for adequate protection of human health and the environment, as determined by the department. The owner or operator of the AST shall modify the plan as necessary to meet this standard.

(A) If a plan is required, the owner or operator shall submit the plan within forty-five (45) days or according to a schedule and format established by the department.

(B) Even if not requested by the department, an owner or operator of an AST may elect to submit a corrective action plan.

(C) Once a plan has been submitted, the department will review the corrective action plan to ensure that implementation of the plan will adequately protect human health and the environment. In making this determination, the department will consider the factors listed in subsection (2)(B) of this rule.

(D) Upon written approval of the plan, or as directed by the department, the owner or operator of the AST shall implement the plan, including any modifications to the plan made by the department. The owner or oper-

ator shall evaluate and report the results of implementing the plan in accordance with a schedule and in a format established by the department.

(E) An owner or operator of an AST may begin remediation of soil and groundwater prior to approval of the corrective action plan provided they:

1. Notify the department in writing of their intention to begin cleanup;
2. Comply with any conditions imposed by the department, including cessation of remedial activities or mitigation of adverse consequences from cleanup activities; and
3. Incorporate all self-initiated remedial measures into the corrective action plan submitted to the department for approval.

(F) An owner or operator of an AST shall follow a written procedure for establishing a corrective action plan. The department's Corrective Action Guidance Document may be used as a written procedure. Other written procedures may be used with prior written approval from the department.

AUTHORITY: sections 319.137 and 644.026, RSMo 2000. Original rule filed Sept. 13, 2001, effective May 30, 2002.*

**Original authority: 319.137, RSMo 1989, amended 1993, 1995; and 644.026, RSMo 1972, amended 1973, 1987, 1993, 1995, 2000.*