

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WATER DIVISION - WATER QUALITY PROGRAM**

**CHAPTER 335-6-15  
TECHNICAL STANDARDS, CORRECTIVE ACTION REQUIREMENTS AND  
FINANCIAL RESPONSIBILITY FOR OWNERS AND OPERATORS OF  
UNDERGROUND STORAGE TANKS**

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**335-6-15-.01 Purpose.** This chapter is promulgated to establish construction, installation, performance, and operating standards for underground storage tanks and to implement the purposes and objectives of the Alabama Underground Storage Tank and Wellhead Protection Act of 1988 with respect to the regulation of underground storage tanks.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, §§ 22-36-1 et seq.

**History:** April 5, 1989.

**335-6-15-.02 Definitions.** The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise:

(a) "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

(b) "ADEM" means the Alabama Department of Environmental Management.

(c) "Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

(d) "Belowground release" means any release to the subsurface of the land, including releases to groundwater. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

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

(f) "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

(g) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

(h) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(i) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

(j) "Connected piping" means all underground piping including valves, elbows, joints, flanges and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

(k) "Consumptive use" with respect to heating oil means consumed on the premises.

(l) "Contaminant" means a regulated substance which has been released into the environment.

(m) "Continuous interstitial monitoring" means performing interstitial monitoring on an uninterrupted basis.

(n) "Corrective action limits (CAL)" means those contaminant concentrations which must be achieved in order for corrective action to be deemed complete by the Department.

(o) "Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has

certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

(p) "De minimis concentration" means that amount of a substance mixed with another substance that is so little, small, minuscule, or tiny that it does not alter the properties of the substance with which it is mixed.

(q) "Department" means the Alabama Department of Environmental Management.

(r) "Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

(s) "Director" means the Director of the Alabama Department of Environmental Management.

(t) "Dispenser" is a device designed to dispense motor fuels and kerosene.

(u) "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

(v) "Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

(w) "Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before April 5, 1989. Installation is considered to have commenced if:

1. the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

2. either a continuous on-site physical construction or installation program has begun; or,

3. the owner or operator has entered into contractual obligations--which cannot be cancelled or modified without substantial loss--for physical construction at the site or installation of the tank system to be completed within a reasonable time.

(x) "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

(y) "Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

(z) "Free product" refers to a regulated substance that is present as a nonaqueous phase liquid (e.g., liquid not dissolved in water).

(aa) "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

(bb) "Groundwater" means water below the land surface in a zone of saturation.

(cc) "Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under division 14 of the ADEM Administrative Code) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

(dd) "Heating oil" means petroleum that is No. 1, No. 2, No. 4--light, No. 4--heavy, No. 5--light, No. 5--heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

(ee) "Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that used compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

(ff) "Interstitial monitoring" is a method of routinely checking at regular intervals for leaks into the area between the primary wall of an UST or piping and an outer secondary barrier.

(gg) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

(hh) "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.

(ii) "Motor fuel" means petroleum, petroleum-based substance or petroleum blend with more than a de minimis concentration of petroleum that

is typically used for combustion in the operation of a motor or engine such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, any grade of gasohol, biodiesel, etc.

(jj) "New dispenser system" is either a newly manufactured or operational dispenser and the equipment necessary to connect the dispenser to the underground storage tank system, which includes check valves, shear valves, unburied risers, flex connectors, or other transitional components which connect the dispenser to the underground piping, which is installed for the first time or at a new location on August 6, 2007 and thereafter.

(kk) "New tank system" means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after April 5, 1989. [See also "Existing tank system."]

(ll) "Noncommercial purposes" with respect to motor fuel means not for resale.

(mm) "On the premises where stored" with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

(nn) "Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under rules 335-6-15-.33 through 335-6-15-.37.

(oo) "Operator" means any person in control of, or having responsibility for, the daily operation of the UST system.

(pp) "Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

(qq) "Owner" means: in the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and in the case of any UST system in use before November 8, 1984, but no longer in use on that date, the present owner of the underground storage tank and any person who owned such underground storage tank immediately before the discontinuation of its use.

(rr) "Person" means an individual, trust, firm, joint stock company, federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States Government.

(ss) "Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis concentrations of other regulated substances. Such systems include those

containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

(tt) "Pipe" or "Piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials that routinely contains and conveys regulated substances from the underground tank(s) to the dispenser(s) or other end-use equipment. Such "pipe" or "piping" includes any elbows, couplings, unions, valves, or other in-line fixtures that contain and convey regulated substances from the underground storage tank(s) to the dispenser(s). This definition excludes vent, vapor recovery, or fill lines that do not routinely contain regulated substances.

(uu) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

(vv) "Red tag" means a tamper resistant device or mechanism which can be placed on an underground storage tank's fill pipe that clearly identifies the tank as being prohibited from accepting regulated substance delivery. The device or mechanism is easily visible to the regulated substance deliverer and clearly conveys that it is unlawful to deliver to, or accept product into the underground storage tank.

~~(vww)~~ "Regulated substance" means any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under division 14 of the ADEM Administrative Code); and petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "regulated substance" includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

(xx) "Regulated substance deliverer" means any person who delivers a regulated substance to an underground storage tank.

~~(wwwyy)~~ "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into groundwater, surface water or subsurface soils.

~~(xxzz)~~ "Release detection" means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

~~(yyaaa)~~ "Repair" means to restore a tank or UST system component that has caused a release of product from the UST system.

(~~zz~~bbb) "Residential tank" is a tank located on property used primarily for dwelling purposes.

(~~aaa~~ccc) "SARA" means the Superfund Amendments and Reauthorization Act of 1986.

(~~bbb~~ddd) "Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

(eee) "Significant noncompliance requiring delivery prohibition" means a failure of an owner or operator to comply with any of the following requirements of this chapter that will result in the Department prohibiting delivery of regulated substances to an underground storage tank facility, after being given notice: installation of spill prevention, overfill prevention, leak detection, or corrosion protection equipment on an underground storage tank system as required by rule 335-6-15-.03, rule 335-6-15-.04, rule 335-6-15-.06, 335-6-15-.07, rules 335-6-15-.09 through 335-6-15-.12, and rules 335-6-15-.14 through 335-6-15-.18.

(fff) "Significant noncompliance subject to delivery prohibition" means a failure of an owner or operator to comply with any of the following requirements of this chapter that may result in the Department prohibiting delivery of regulated substances to an underground storage tank facility, after being given notice and appropriate time by the Department to comply:

1. Notification requirements for an underground storage tank system with the Department in accordance with rule 335-6-15-.05;

2. Operation and/or maintenance of spill prevention, overfill prevention, leak detection, or corrosion protection equipment on an underground storage tank system as required by rule 335-6-15-.03, rule 335-6-15-.04, rule 335-6-15-.06, rule 335-6-15-.07, rule 335-6-15-.09, rule 335-6-15-.10, and rules 335-6-15-.14 through 335-6-15-.18;

3. Installation, operation and/or maintenance of under dispenser containment or submersible pump containment on an underground storage tank system as required by rule 335-6-15-.03, rule 335-6-15-.06, and rule 335-6-15-.09;

4. Compatibility, and repair requirements on an underground storage tank system as required by rule 335-6-15-.11 and rule 335-6-15-.12;

5. Failure to submit documentation or reports relating to spill prevention, overfill prevention, leak detection, corrosion protection, under dispenser containment, submersible pump containment, compatibility and repairs for an underground storage tank system within the time frame required

by this chapter or within a reasonable time frame upon request by the Department;

6. Payment of the yearly underground storage tank regulation fee in accordance with rule 335-6-15-.42;

7. Take appropriate action in response to a release or suspected release of product as outlined by rules 335-6-15-.20 through 335-6-15-.25; or

8. Investigation, and/or clean up a release from an underground storage tank system in a timely manner, in accordance with rules 335-6-15-.26 through 335-6-15-.30.

(~~eee~~ggg) "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

(~~ddd~~hhh) "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

(~~eee~~iii) "Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

(~~fff~~jjj) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

(~~ggg~~kkk) "Underground release" means any belowground release.

(~~hhh~~lll) "Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. Tank used for storing heating oil for consumptive use on the premises where stored;
3. Septic tank;

4. Pipeline facility (including gathering lines) regulated under:
  - (i) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
  - (ii) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
  - (iii) State laws comparable to the provisions of law in subparagraph (i) or (ii) above;
5. Surface impoundment, pit, pond, or lagoon;
6. Storm-water or wastewater collection system;
7. Flow-through process tank;
8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
9. Storage tank situated in an underground area (such as a basement cellar, mine working, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.
10. Other tanks exempted by the administrator of the United States Environmental Protection Agency; and
11. Piping connected to any of the above exemptions.

(mmm) "Underground storage tank facility" is a single site or location containing one or more underground storage tank systems.

(nnn) "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

(ooo) "UST system" or "Tank system" means an underground storage tank, connected to and including underground piping, underground ancillary equipment, and containment system, if any, as well as underground vent, vapor recovery, or fill lines.

(kkkppp) "Wastewater treatment tank" means a tank that is designated to receive and treat an influent wastewater through physical, chemical, or biological methods.

(qqq) "Waters" means all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce.

(~~mmmm~~rrr) Individual Excess Lifetime Cancer Risk (IELCR) - The increase over background in an individual's probability of getting cancer over a lifetime due to exposure to a chemical.

(~~nnm~~sss) Hazard Quotient - a ratio of the level of exposure of a chemical over a specified time period to a reference dose for that chemical of concern derived for a similar exposure period.

(~~eee~~ttt) Reference Dose - An estimate of a daily exposure to the general human population that is likely to be without an appreciable risk of deleterious effects during a lifetime of exposure.

(~~ppp~~uuu) Health Advisory Level (HAL)-A level established by EPA which provides the level of a contaminant in drinking water at which adverse non-carcinogenic health effects would not be anticipated with a margin of safety.

(~~qqq~~vvv) Maximum Contaminant Level (MCL) - A level established by EPA which is the maximum permissible level of a contaminant in drinking water, which is delivered to any user of a public water system.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, §§ 22-36-2, 22-36-3.

**History** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007; XXXXXX, 2008.

### **335-6-15-.03 Applicability.**

(1) The requirements of this chapter apply to all owners and operators of an UST system as defined in rule 335-6-15-.02 except as otherwise provided for in paragraphs (2), (3) and (4) of this rule. Any UST system listed in paragraph (3) of this rule must meet the requirements of rule 335-6-15-.04.

(2) The following UST systems are excluded from the requirements of this chapter:

(a) Any UST system holding hazardous wastes listed or identified under division 14 of the ADEM Administrative Code, or a mixture of such hazardous wastes and other regulated substances.

(b) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under chapters 335-6-5 or 335-6-6 of the ADEM Administrative Code.

(c) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(d) Any UST system whose capacity is 110 gallons or less.

(e) Any UST system that contains a de minimis concentration of regulated substances.

(f) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(3) Deferrals. The following UST systems are only subject to rules 335-6-15-.04 and 335-6-15-.20 through 335-6-15-.31

(a) Wastewater treatment tank systems;

(b) Any UST system containing radioactive materials that are regulated under the Atomic Energy Act of 1954 (42 USC 2011 and following);

(c) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50 Appendix A;

(d) Airport hydrant fuel distribution systems; and

(e) UST systems with field constructed tanks.

(4) Deferrals. Any existing UST system that stores fuel solely for use by emergency power generators is not subject to rules 335-6-15-.14 through 335-6-15-.19. Beginning August 6, 2007 and thereafter, when a UST system is installed that stores fuel solely for use by emergency power generators, the UST system is subject to all rules in this chapter. Beginning August 6, 2007 and thereafter, when piping is installed on an existing UST system that stores fuel solely for use by emergency power generators, only the piping is subject to all the rules in this chapter.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007.

**335-6-15-.04 Interim Prohibition for Deferred UST Systems.** No person may install an UST system listed in rule 335-6-15-.02(fff) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):

(a) Will prevent releases due to corrosion or structural failure for the operational life of the UST system;

(b) Is protected by one of the following methods: cathodically protected against corrosion; constructed of noncorrodible material; steel clad with a noncorrodible material; or designed in a manner to prevent the release or threatened release of any stored substance; and

(c) Is constructed or lined with material that is compatible with the stored substance.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007; XXXXXX, 2008.

### **335-6-15-.05 Notification Requirements.**

(1) Any owner or operator of an underground storage tank system for which a notification has not been provided to the Department as of April 5, 1989, must within 30 days of that date, submit, in a form approved by the Department, a notice of the existence of such tank system to the ADEM. Notification shall include the information identified in paragraph (2) below.

(2) Any owner who brings an underground storage tank system into use after April 5, 1989, must within 30 days of bringing such tank into use, submit, in a form approved by the Department, a notice of the existence of such tank system to the ADEM. Notification shall include the following information:

- (a) Owner and operator name, ~~and~~ address and telephone number.
- (b) Type of owner (e.g., sole proprietor, partnership, corporation).
- (c) Location of tank.
  - 1. Description of facility location;
  - 2. Mailing address of facility at which tank is located (where applicable);
- (d) ~~Name and telephone number of contact person~~ at the underground storage tank facility where the tank is located (where applicable).
- (e) Operational status of tank.
- (f) Estimated age of tank.
- (g) Estimated total capacity in gallons.
- (h) Material of construction of tank and piping.
- (i) Type of tank internal protection.
- (j) Type of tank external protection.
- (k) Type of release detection method or methods.
- (l) Substance currently stored.

(m) Type of product dispensing system; pressure or suction.

(n) Location of check valve and slope of piping for suction systems.

(o) Regulated substance deliverer name, address and telephone number.

(ep) Other such information determined to be necessary by the Department.

(3) An owner of an UST system which has had a modification which has changed any of the information reported originally under paragraph (1) or (2) of this rule must submit an amended notification to the department within 30 days of the completion of that modification.

(4) Owners required to submit notices under paragraphs (1) and (2) of this rule must provide notices to the Department for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

(5) Notices for tanks installed after April 5, 1989 must also provide all of the information required in rule 335-6-15-.06(f) for each tank for which notice must be given.

(6) All owners and operators of new UST systems must certify in the notification, that they are in compliance with the following requirements:

(a) Installation of tanks and piping under rule 335-6-15-.06(e);

(b) Cathodic protection of steel tanks and piping under rule 335-6-15-.06(a) and (b);

(c) Financial responsibility under rules 335-6-15-.44 and 335-6-15-.45;

(d) Release detection under rules 335-6-15-.15 and [335-6-15-.16](#).

(7) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in rule 335-6-15-.06(e).

(8) Any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under paragraph (2) of this rule.

(9) Any person who sells an UST system that is already in service must: notify the Department of such sale, provide proof of transfer of ownership of the UST system and provide the name and address of the new UST system owner to the Department.

(10) A person receiving ownership of an UST system under the conditions of paragraph (9) of this rule must comply with the notification requirements of paragraphs (1) and (3) of this rule.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007; [XXXXXX, 2008](#).

**335-6-15-.06 Performance Standard for New USTs, Piping, UST Systems, and/or Dispensers.** In order to prevent releases due to structural failure, corrosion, leakage from submersible pumps and dispensers or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new USTs, piping, UST systems and/or dispensers must meet the following requirements:

(a) USTs. USTs installed on August 6, 2007 and thereafter must be manufactured so that any portion of the tank that is underground and routinely contains product has an inner and outer wall, and interstitial space. The USTs must be designed to allow monitoring of the integrity of both the inner and outer wall, contain a leak into the interstitial space until it is detected and removed, and prevent a release to the environment at any time during its operational life. Each UST must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

1. The UST is constructed of fiberglass-reinforced plastic; or
2. The UST is constructed of steel and cathodically protected in the following manner:
  - (i) The UST is coated with a suitable dielectric material;
  - (ii) Field-installed cathodic protection systems are designed by a corrosion expert;
  - (iii) Cathodic protection systems are designed to allow determination of current operating status according to the requirements of rule 335-6-15-.10; and
  - (iv) Cathodic protection systems are operated and maintained in accordance with rule 335-6-15-.10.
3. The UST is constructed of a steel-fiberglass-reinforced-plastic composite; or
4. The UST construction and corrosion protection are determined by the Department to be designed to prevent the release or threatened release of

any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements of subparagraphs (a)1. through 3. of this rule.

(b) Piping. All piping, other than suction piping that meets the requirements specified in rule 335-6-15-.15(b)2.(i), (ii), (iii), (iv), and (v), installed on August 6, 2007 and thereafter must be manufactured so that piping in contact with the ground has an inner and outer wall and interstitial space. Such piping must be designed to allow monitoring of the integrity of both the inner and outer wall, contain a leak into the interstitial space until it is detected and removed, and prevent a release to the environment at any time during its operational life. All piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, as specified below:

1. The piping is nonmetallic and is constructed of either fiberglass-reinforced plastic (rigid) or thermoplastic (flexible). Nonmetallic piping installed on January 10, 2006, and thereafter, must meet the requirements of the most current edition of Underwriters Laboratories Inc. "Standard for Safety for Nonmetallic Underground Piping for Flammable Liquids", "UL 971". Performance claims must be demonstrated by an evaluation properly conducted in accordance with "UL 971"; or

2. The piping is constructed of steel and cathodically protected in the following manner:

(i) The piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Cathodic protection systems are designed to allow determination of current operating status according to the requirements of rule 335-6-15-.10; and

(iv) Cathodic protection systems are operated and maintained in accordance with rule 335-6-15-.10.

3. The piping construction and corrosion protection are determined by the Department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in subparagraphs (b)1. and 2. of this rule.

(c) Spill and Overfill Prevention Equipment. Except as provided for in sub-paragraph (c)3. below, to prevent spilling and overfilling associated with product transfer to the UST, owners and operators must use the following spill and overfill prevention equipment or preventive measures in 1. and 2. below:

1. Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin) operated and maintained in accordance with rule 335-6-15-.09; and

2. Overfill prevention equipment that will:

(i) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or

(ii) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm.

3. Owner and operators are not required to use the spill and overfill prevention equipment specified in subparagraphs (c)1. and 2. above if alternative equipment is used that is determined by the Department to be no less protective of human health and the environment than the equipment specified in subparagraph (c)1. or 2. of this rule; or the UST system is filled by transfers of no more than 25 gallons at one time.

(d) Submersible Pump and Under Dispenser Containment. USTs installed with submersible pumps on August 6, 2007 and thereafter, must have submersible pump containment sumps. New dispenser systems installed on August 6, 2007 and thereafter, must have under dispenser containment sumps. The sumps must be operated and maintained in accordance with rule 335-6-15-.09. Containment sumps must be designed, constructed, installed, and maintained to:

1. Be liquid-tight on all sides, bottom and all penetrations to contain leakage and prevent release of regulated substances from equipment related to dispensers and submersible pumps until the regulated substance is detected and removed; and

2. Be compatible with the substance conveyed by the piping to prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

3. Be able to be visually inspected for evidence of a leakage into the sumps.

(e) Installation. All tanks and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory in accordance with the manufacturer's instructions, and in accordance with plans and specifications reviewed by the Department, where required, to include any modifications required to be made by the Department.

(f) Certification of Installation. All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subparagraph (e) of this rule by

providing a certification of compliance on the UST notification form in accordance with rule 335-6-15-.05.

1. The installer has been certified by the tank and piping manufacturers; or

2. The installation has been inspected and certified by a registered professional engineer, possessing education and experience in UST system installation and that the UST system has been installed in accordance with plans and specifications which have been reviewed by the Department where required; or

3. The installation has been inspected and approved by the Department; or

4. All work listed in the manufacturer's installation checklists has been completed, and the installation is in accordance with plans and specifications reviewed by the Department, where required; or

5. The owner and operator have complied with another method for ensuring compliance with subparagraph (d) of this rule that is determined by the Department to be no less protective of human health and the environment.

(g) The Department reserves the right to inspect an UST system within 30 days of submission of plans or notification of installation prior to the UST system being fully backfilled and placed into operation. The Department may authorize a representative to make this inspection.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** January 10, 2006; August 6, 2007; [XXXXXX, 2008](#).

### **335-6-15-.07 Upgrading of Existing UST Systems.**

(1) Alternatives Allowed. Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:

(a) New UST system performance standards under rule 335-6-15-.06;

(b) The upgrading requirements in paragraphs (2) through (4) below;  
or

(c) Closure requirements under rules 335-6-15-.33 through 335-6-15-.39, including applicable requirements for corrective action under rules 335-6-15-.25 through 335-6-15-.31.

(2) Tank Upgrading Requirements. Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice

developed by a nationally recognized association or independent testing laboratory:

(a) Interior Lining. A tank may be upgraded by internal lining if:

1. The lining is installed in accordance with the requirements of rule 335-6-15-.12, and

2. Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(b) Cathodic Protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of rule 335-6-15-.06(a)2.(ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

1. The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

2. The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with rule 335-6-15-.17(d) through (h); or

3. The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of rule 335-6-15-.17(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or

4. The tank is assessed for corrosion holes by a method that is determined by the Department to prevent releases in a manner that is no less protective of human health and the environment than the requirements of subparagraphs (2)(b)1. through 3. of this rule.

(c) Internal Lining Combined With Cathodic Protection. A tank may be upgraded by both internal lining and cathodic protection if:

1. The lining is installed in accordance with the requirements of rule 335-6-15-.12; and

2. The cathodic protection system meets the requirements of rule 335-6-15-.06(a)2.(ii), (iii), and (iv).

(3) Piping Upgrading Requirements. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a

nationally recognized association or independent testing laboratory, and must meet the requirements of rule 335-6-15-.06(b)2.(ii), (iii), and (iv).

(4) Spill and Overfill Prevention Equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in rule 335-6-15-.06(c).

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007.

**335-6-15-.08 Plans and Specifications.**

(1) Submission of Plans. The Department may require the submission of plans, specifications, and other technical data pursuant to rule 335-6-15-.06, 335-6-15-.07, or any other requirement by the Department relating to the construction of UST systems, upgrading of UST systems, installation of release detection equipment, corrosion protection measures, or engineering design related to the implementation of a corrective action plan.

(a) Plans and specifications shall be submitted at least 30 days prior to the anticipated date of construction or installation.

(b) Where plans and specifications are not required, a notification of installation shall be submitted 30 days prior to the anticipated date of installation.

(c) Plan and specification submissions shall be in a form which is acceptable to the Department.

(d) The Department may require modification of submitted plans and specifications, where necessary, to demonstrate compliance with applicable requirements.

(2) Preparation of Plans, Specifications, and Technical Data. Plans, specifications, and technical data submitted to the Department for review shall bear the seal or number of a professional engineer, in accordance with Alabama law concerning engineering practices, who is competent to perform work in this field of engineering.

(3) Plans and specifications submitted for construction and upgrading of UST systems shall, where applicable, adequately describe:

(a) Site sketch with boundaries and structures approximately to scale.

(b) Tank excavation dimensions and location.

- (c) Tank capacity, dimensions, materials of construction, and material to be stored, and whether of single or double wall construction.
- (d) Type and size of backfill material.
- (e) Depth of backfill to be placed under tank.
- (f) Water table data for the site, including the annual high and low water table elevations as determined from nearby water supply wells, piezometers, or other available hydrogeologic data.
- (g) Supports and anchorage design if applicable.
- (h) Piping dimensions, materials of construction, layout, location of dispensers, and slope of piping for suction systems.
- (i) Release detection method to be used, to include:
  - 1. Number, location and construction details for any monitoring wells, whether for groundwater monitoring, vapor monitoring or monitoring of an interstitial space.
  - 2. Description of and manufacturer's performance specifications for any continuous monitoring equipment to be used where required by the Department.
  - 3. For non-continuous monitoring, (other than manual sampling of groundwater monitoring wells), a description of and manufacturer's performance specifications for the type of equipment to be used where required by the Department.
  - 4. Manufacturer specifications for any secondary barrier to be used in interstitial monitoring.
- (j) Wiring and conduit associated with monitoring systems.
- (k) Information regarding the cathodic protection method to be used, to include:
  - 1. Type of cathodic protection, galvanic or impressed current.
  - 2. Test or monitoring station for cathodic protection system.
  - 3. Location and weight of sacrificial anodes.
  - 4. The corrosion expert responsible for the design of a field installed cathodic protection system.
- (l) Spill and overflow containment devices.

(m) For groundwater monitoring well systems, the hydraulic conductivity of the soils in which the monitoring wells will be placed.

(n) Type of secondary containment, where applicable.

(o) Whether or not the UST system will be within 300 feet of a private domestic water supply or 1000 feet of a public water supply well.

(p) Any other information that may be required by the Department.

(4) Existing Systems. When plans and specifications are submitted for existing systems, all available information should be submitted regarding the above items.

(5) Modifications or Alterations. Any proposed modification or alteration of plans, specifications, or technical data previously submitted to and reviewed by the Department which could affect the UST system's compliance with this chapter must also be forwarded to the Department for review.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, §§ 22-36-3, 22-36-4.

**History:** April 5, 1989.

**Amended:** August 6, 2007.

**335-6-15-.09 Operation and Maintenance of Spill and Overfill Control, and Containment Systems.**

(1) Owners and operators must comply with the following requirements to ensure that releases due to spilling or overfilling do not occur:

(a) The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

(b) If a spill catchment basin is used, ensure that it is cleaned out before the transfer of regulated substance to the tank so that all the catchment basin volume is available to contain a spill.

(c) Spill catchment basins shall be checked for leakage annually by cleaning the basin and adding enough liquid to completely fill the basin. If the liquid level in the basin drops by one quarter inch or more after at least one hour, the spill catchment basin must be repaired, or replaced. A log of the results of annual tests shall be maintained in accordance with rule 335-6-15-.13.

(d) When a regulated substance is being released or is suspected to have been released from the catchment basin to the surrounding surface or

subsurface, notify the Department of a suspected release in accordance with rule 335-6-15-.20.

(2) Beginning on August 6, 2007 and thereafter, owners or operators of UST systems with under dispenser and/or submersible pump containment sumps which are not used to meet leak detection requirements must comply with the following requirements:

(a) Inspect under dispenser and/or submersible pump containment sumps annually and keep a log of the results of the annual inspection.

(b) When a regulated substance is discovered in under dispenser and/or submersible pump containment sumps:

1. Remove the regulated substance within 24 hours; any regulated substance which is removed must be disposed of in accordance with all state and federal requirements;

2. Repair any necessary equipment to prevent further leakage of regulated substance into the under dispenser and/or submersible pump containment sumps.

(c) When a regulated substance is being released or is suspected to have been released from under dispenser and/or submersible pump containment sumps to the surrounding surface or subsurface:

1. Shut off the submersible pump;

2. Notify the Department of a suspected release in accordance with rule 335-6-15-.20.

(d) Breaches in under dispenser and/or submersible pump containment sumps which may result in a release of a regulated substance must be repaired immediately.

(3) Beginning on August 6, 2007 and thereafter, owners or operators of UST systems with under dispenser and/or submersible pump containment sumps which are used to meet leak detection requirements must comply with the following requirements:

(a) Inspect under dispenser and/or submersible pump containment sumps annually and keep a log of the results of the annual inspection.

(b) Under dispenser and/or submersible pump containment sumps must remain free of water, regulated substance and debris.

(c) When a regulated substance is discovered in under dispenser and/or submersible pump containment sumps:

1. Remove the regulated substance within 24 hours; any regulated substance which is removed must be disposed of in accordance with all state and federal requirements;

2. Repair any necessary equipment to prevent further leakage of regulated substance into under dispenser and/or submersible pump containment sumps.

(d) When a regulated substance is being released or is suspected to have been released from under dispenser and/or submersible pump containment sumps to the surrounding surface or subsurface:

1. Shut off the submersible pump;

2. Notify the Department of a suspected release in accordance with rule 335-6-15-.20.

(e) The operation of any under dispenser and/or submersible pump containment sumps sensors must be checked annually to ensure that they are working properly.

(f) Breaches in a under dispenser and/or submersible pump containment sumps which may result in a release of a regulated substance must be repaired immediately.

(4) The owner and operator must report, investigate, and clean up any leaks, spills and overfills in accordance with rule 335-6-15-.23.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** August 6, 2007.

**335-6-15-.10 Operation and Maintenance of Corrosion Protection.** All owners and operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

(a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

(b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

1. Frequency. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter; and

2. Inspection Criteria. The criteria that are used to determine that cathodic protection is adequate as required by subparagraphs (a) and (b) of this rule must be in accordance with the code of practice established by the National Association of Corrosion Engineers.

(c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is operating properly.

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained in accordance with rule 335-6-15-.13 to demonstrate compliance with the performance standards in this section. These records must provide the following:

1. The results of the last three inspections required in subparagraph (c) of this rule; and

2. The results of testing from the last two inspections required in subparagraph (b) of this rule.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**335-6-15-.11 Compatibility.** Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system. ~~For petroleum, and alcohol blends this determination shall be in accordance with the code of practice established by the American Petroleum Institute.~~ Compatibility shall be in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory when such codes of practice are available.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989; XXXXXX, 2008.

**335-6-15-.12 Repairs Allowed.** Owners and operators of UST systems must ensure the repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(b) Repairs to fiberglass-reinforced plastic tanks must be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced with piping in accordance with rule 335-6-15-.06(b). Repairs to nonmetallic fiberglass-reinforced plastic (rigid) or nonmetallic thermoplastic (flexible) piping and fittings must be made in accordance with the manufacturer's specifications. Beginning on January 10, 2006, and thereafter, materials used to repair or replace nonmetallic piping must conform to the most current edition of Underwriters Laboratories Inc. "Standard for Safety for Nonmetallic Underground Piping for Flammable Liquids", "UL 971". Performance claims must be demonstrated by an evaluation properly conducted in accordance with "UL 971".

(d) Repairs may be made to existing piping only if one repair of less than 5 ft can be made to one run of piping within a 30 day period. Otherwise, for a given piping run, piping must be installed in accordance with rule 335-6-15-.06(b).

(e) Repaired tanks and piping must be tightness tested in accordance with rule 335-6-15-.17(c) and rule 335-6-15-.18(b) within 30 days following the date of the completion of the repair except as provided in paragraphs 1. through 3., below:

1. The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory, and certification of this inspection provided to the Department by the owner or operator and the party performing the internal inspection; or

2. The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in rule 335-6-15-.17(d) through (h); or

3. Another test method is used that is determined by the Department to be no less protective of human health and the environment than those listed above.

(f) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with rule 335-6-15-.10(b) and (c) to ensure that it is operating properly.

(g) UST system owners and operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this rule.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** January 10, 2006; August 6, 2007.

**335-6-15-.13 Reporting and Recordkeeping.** Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the Department as well as requests for document submission, submission of engineering or technical data, and testing and monitoring performed by the owner or operator at the request of the Department.

(a) Reporting. Owners and operators must submit the following information to the ADEM:

1. Notification for all UST systems in accordance with rule 335-6-15-.05, which includes certification of installation for new UST systems, rule 335-6-15-.06(f);

2. Reports of all releases including suspected releases (rule 335-6-15-.20), spills and overfills (rule 335-6-15-.23), and confirmed releases (rule 335-6-15-.24);

3. Corrective actions planned or taken including initial abatement measures (rule 335-6-15-.25), conducting a preliminary investigation (rule 335-6-15-.26), free product removal (rule 335-6-15-.27), conducting a secondary investigation (rule 335-6-15-.28) and corrective action plan (rule 335-6-15-.29); and

4. A notification before permanent closure or change-in-service (rule 335-6-15-.34) and upon completion of final closure or change-in-service.

5. Results of all tightness, ~~and~~ cathodic protection, and leak detector testing of a UST system.

6. Annual summary of test results no later than January 31<sup>st</sup> of each year for any approved method of leak detection under rule 335-6-15-.17(h) as required by the Department.

(b) Recordkeeping. Owners and operators must maintain the following information:

1. Documentation of operation of corrosion protection equipment (rule 335-6-15-.10);

2. Documentation of UST system repairs [rule 335-6-15-.12(g)];

3. Compliance with release detection requirements (rule 335-6-15-.19);

4. Documentation of all tightness, cathodic protection, and spill catchment basin testing performed for an UST system.

5. Results of the site investigation conducted at permanent closure (rule 335-6-15-.37).

6. Documentation of release detection equipment maintenance and calibrations where applicable as required by equipment manufacturer or by the Department.

7. Documentation of compliance with notification requirements (rule 335-6-15-.05).

(c) Availability and Maintenance of Records. Owners and operators must keep the records required either:

1. At the UST site and immediately available for inspection by the Department; or

2. At a readily available alternative site and be provided for inspection to the Department upon request.

3. In the case of permanent closure, records required under rule 335-6-15-.37 may be mailed to the Department if they cannot be kept at the site or an alternative site.

(d) Current proof of tank registration shall be displayed at active retail petroleum facilities.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, §§ 22-36-3, 22-36-4.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007; [XXXXXX, 2008](#).

**335-6-15-.14 General Release Detection Requirements for All UST Systems.**

(1) Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:

(a) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

(b) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

(c) Meets the performance requirements in rule 335-6-15-.17 or rule 335-6-15-.18, with any performance claims and their manner of determination

described in writing by the equipment manufacturer or installer. In addition, methods used after December 22, 1990, except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in rule 335-6-15-.17(b), (c) and (d) or rule 335-6-15-.18(a) and (b) with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(2) When a release detection method operated in accordance with the performance standards in rule 335-6-15-.17 and rule 335-6-15-.18 indicates a release may have occurred, owners and operators must notify the Department in accordance with rule 335-6-15-.20.

(3) Owners and operators of all UST systems must comply with the release detection requirements of this chapter by December 22 of the year listed in Table A.

(4) Any existing UST system that cannot apply a method of release detection that complies with the requirements of this chapter must complete the closure procedures in rules 335-6-15-.34 through 335-6-15-.37 by the date on which release detection is required for that UST system under paragraph (3) of this rule.

(5) Owners of existing UST systems shall submit to the Department a description of the type of release detection method or methods which will be used at each site at which an UST system is located.) This description and any required plans and specifications shall be submitted at least 60 days prior to the date for which release detection is required according to Table A.

(6) Release detection on systems employing the methods of vapor monitoring, groundwater monitoring or interstitial monitoring shall be installed according to plans and specifications reviewed by the Department, where required.

(7) Owners and operators must ensure that personnel who are familiar with the monitoring, operation, maintenance and calibration requirements of release detection equipment for an UST system are routinely present at the location of the UST.

**TABLE A**  
**Schedule for Phase-in of Release Detection**

| Year System was Installed   | Year When Release Detection is Required (By Dec. 22 of the year indicated.) |          |      |      |      |
|-----------------------------|---|----------|------|------|------|
|                             | 1989  | 1990     | 1991 | 1992 | 1993 |
| Before 1965 or date unknown | RD  | P        |      |      |      |
| 1965-1969                   |   | P/RD     |      |      |      |
| 1970-1974                   |   | P        | RD   |      |      |
| 1975-1979                   |   | P        |      | RD   |      |
| 1980-1988                   | <u>P</u>  | <u>P</u> |      |      | RD   |
| New Tanks                   | Immediately upon installation beginning April 5, 1989 and thereafter.       |          |      |      |      |

P = Must begin release detection for all pressurized piping in accordance with rules 335-6-15-.15(b)1. and 335-6-15-.16(b)4.

RD = Must begin release detection for tanks and suction piping in accordance with rule 335-6-15-.15(a), 335-6-15-.15(b)2., and 335-6-15-.16.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; XXXXXX, 2008.

**335-6-15-.15 Release Detection Requirements For Petroleum UST Systems.** Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

(a) USTs. USTs installed beginning August 6, 2007 and thereafter, must perform interstitial monitoring in accordance with rule 335-6-15-.17(g). Otherwise, USTs must be monitored at least every 30 days for releases using one of the methods listed in rule 335-6-15-.17(d) through (h) except that:

1. UST systems that meet the performance standards in rules 335-6-15-.06 or 335-6-15-.07, and the monthly inventory control requirements in rule 335-6-15-.17(a) or (b), may use tank tightness testing [conducted in accordance with rule 335-6-15-.17(c)] at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under rule 335-6-15-.07(2), whichever is later;

2. UST systems that do not meet the performance standards in rules 335-6-15-.06 or 335-6-15-.07 may use monthly inventory controls (conducted in accordance with rule 335-6-15-.17(a) or (b) and annual tank tightness testing (conducted in accordance with rule 335-6-15-.17(c) until December 22, 1998, when the tank must be upgraded under rule 335-6-15-.07 or permanently closed under rule 335-6-15-.34; and

3. Tanks with capacity of 550 gallons or less may use weekly tank gauging (conducted in accordance with rule 335-6-15-.17(b).

(b) Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

1. Pressurized Piping. Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector conducted in accordance with rule 335-6-15-.18(a); and

(ii) Pressurized underground piping installed beginning August 6, 2007 and thereafter, must perform interstitial monitoring in accordance with rule 335-6-15-.18(c) and as described in rule 335-6-15-.17(g). Otherwise, it must have an annual line tightness test conducted in accordance with rule 335-6-15-.18(b) or have monthly monitoring conducted in accordance with rule 335-6-15-.18(c).

2. Suction Piping. Underground piping that conveys regulated substances under suction installed on or after (insert revision date) must perform interstitial monitoring in accordance with rule 335-6-15-.18(c) and as described in rule 335-6-15-.17(g). Otherwise, it must either have a line tightness test conducted at least every 3 years and in accordance with rule 335-6-15-.18(b), or use a monthly monitoring method conducted in accordance with rule 335-6-15-.18(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(i) The below-grade piping operates at less than atmospheric pressure;

(ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with subparagraphs (ii) through (iv) above, to be readily determined.

(c) Any petroleum UST systems installed prior to August 6, 2007 which are: located within 1000 feet of a public water supply well; located within 300 feet of a private domestic water supply; or which are located in an area which the Department has determined to be exceptionally vulnerable to groundwater contamination, may be required to take additional measures to prevent contamination of groundwater. Such measures may include: the installation of a release detection in accordance with one of the methods in rule 335-6-15-.17(d) through (h) for tanks and (e) through (h) for piping and/or the implementation of more frequent monitoring of release detection systems.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007; [XXXXXX, 2008](#).

**335-6-15-.16 Release Detection Requirements For Hazardous Substance UST Systems.** Owners and operators of hazardous substance UST systems must provide release detection that meets the following requirements:

(a) Hazardous substance UST systems installed beginning August 6, 2007 and thereafter must meet the release detection requirements for petroleum UST systems in rule 335-6-15-.15.

(b) By December 22, 1998, all existing hazardous substance UST systems must have secondary containment and meet the following release detection requirements:

1. Secondary containment systems must be designed, constructed and installed to:

(i) Contain regulated substances released from the tank system until they are detected and removed;

(ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(iii) Be checked for evidence of a release at least every 30 days.

2. Double-walled tanks must be designed, constructed, and installed to:

(i) Contain a release from any portion of the inner tank within the outer wall; and

(ii) Detect the failure of the inner wall.

3. External liners (including vaults) must be designed, constructed, and installed to:

(i) Contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Prevent the interference of precipitation of groundwater intrusion with the ability to contain or detect a release of regulated substances; and

(iii) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

4. Underground piping must be equipped with secondary containment that satisfies the requirements of subparagraph (b)1. above (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with rule 335-6-15-.18(a).

5. Other methods of release detection may be used if owners and operators:

(i) Demonstrate to the Department that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in rule 335-6-15-.17(d) through (h) can detect a release of petroleum;

(ii) Provide information to the Department on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(iii) Obtain approval from the Department to use the alternate release detection method before the installation and operation of the new UST system.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** August 6, 2007.

**335-6-15-.17 Methods Of Release Detection For Tanks.** Each method of release detection for tanks used to meet the requirements of rule 335-6-15-.15 must be conducted in accordance with the applicable requirements (a) through (h) of this rule. The Department may make a determination as to the capability of release detection equipment to meet the requirements of this rule.

(a) Inventory Control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

1. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

2. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

3. The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

4. Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

5. Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

6. The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

(b) Manual Tank Gauging. Manual tank gauging must meet the following requirements:

1. Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

2. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

3. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

4. A leak is suspected and subject to the requirements of rules 335-6-15-.20 through 335-6-15-.23 if the variation between beginning and ending measurements exceed the weekly or monthly standards in the following table:

| <u>Nominal<br/>Tank Capacity</u> | <u>Weekly Standard<br/>(one test)</u> | <u>Monthly Standard<br/>(average of four tests)</u> |
|----------------------------------|---------------------------------------|---|
| 550 gallons or less              | 10 gallons                            | 5 gallons   |
| 551-1,000 gallons                | 13 gallons                            | 7 gallons   |
| 1,001-2,000 gallons              | 26 gallons                            | 13 gallons  |

5. Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in rule 335-6-15-.17(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet release detection requirements of this chapter.

(c) Tank Tightness Testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

1. The test must be performed by an individual having current certification of training from the manufacturer of the test method.

2. Unless waived by the Department the report of tightness testing of a tank must state whether or not the water table was above the base of the tank excavation pit at the time of testing and the method by which this determination was made. If it is above the base, the specific elevation of the water table shall be determined and recorded in the test report.

(d) Automatic Tank Gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

1. The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

2. Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of rule 335-6-15-.17(a).

(e) Vapor Monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following technical and procedural requirements:

1. A vapor monitoring plan with any required plans and specifications, must be submitted to the Department for review by the Department. The plan must be sufficient to demonstrate compliance with the requirements of subparagraphs 2. through 8. below or modifications may be required by the Department.

2. The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

3. The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank. The Department may require testing of a vapor monitoring system with a tracer compound where a system's reliability is in question.

4. The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall, or soil moisture or other

known interference's so that a release could go undetected for more than 30 days;

5. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the UST system based upon information, to include volatile hydrocarbon concentrations, collected throughout the excavation zone where this method is proposed for use.

6. The vapor monitors and vapor monitoring wells are designed and operated in a manner sufficient to: detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system, and provide a vapor sample to the vapor monitor that is representative of the concentration in the excavation zone. Construction details shall comply with subparagraphs 7. through 13. below.

7. The well casing shall be constructed of a material which is compatible with the substance stored; and which has sufficient strength to prevent structural failure.

8. The well casing shall be a minimum of 2 inches in diameter and shall be large enough for the chosen monitoring device to be installed or operated properly in the well. A low permeability backfill may require the use of larger diameter casing.

9. The length and slot size of the slotted portion of the casing should be sufficient to obtain a representative vapor sample in accordance with the depth of excavation zone and site hydrogeology.

10. The well screen should be surrounded by a clean filter pack which allows for passage of vapors while preventing passage of materials which could clog the well screen. The filter pack should extend 1 to 2 feet above the well screen.

11. An annular seal shall extend up from the top of the filter pack for 1 to 2 feet.

12. The well annulus shall be grouted from the top of the bentonite to the ground surface.

13. Monitoring wells shall have a watertight cap or enclosure at the ground surface.

14. In the UST excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs (e) 2. through 5. of this rule and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product;

15. Vapor monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering. Monitoring wells which are located in an area subject to traffic must be equipped with enclosures which will not be damaged by normal traffic.

16. In the event of permanent closure of the UST system, all monitoring wells shall be closed according to a method acceptable to the Department, unless otherwise directed by the Department.

17. If a monitoring well is determined to be improperly constructed, closure may be required according to a method acceptable to the Department.

(f) Groundwater Monitoring. Testing or monitoring for liquids on the groundwater must meet the following technical and procedural requirements:

1. A groundwater monitoring plan with any required plans and specifications, must be submitted for review. The plan must be sufficient to demonstrate that the requirements of 2. through 20. of this subparagraph will be complied with or modifications may be required by the Department.

2. The regulated substance stored is immiscible in water and has a specific gravity of less than one;

3. The level of background contamination in or near the excavation zone will not interfere with the method used to detect releases from the UST system based upon information collected throughout the excavation zone and in the proposed area of well placement if not in the excavation zone.

4. Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

5. Monitoring wells used for the purpose of release detection by groundwater monitoring shall be constructed according to the requirements of 6. through 15. and 20. below;

6. The well casing shall be a minimum of 2 inches in diameter when used for release detection, but shall be 4 inches in diameter if installed for corrective action. All wells shall be constructed with only threaded connections between sections;

7. The well casing shall be constructed of a material which is compatible with the substance stored; and which has sufficient strength to prevent structural failure;

8. The well casing shall be slotted from the bottom to at least two feet above the normal annual high water table where the depth to water will allow,

and shall be designed to prevent migration of natural soils or filter pack into the well and to allow entry of a regulated substance on the water table into the well under both high and low groundwater conditions.

9. The well casing shall extend at least five feet below the water level at the time of drilling but no deeper than 25 feet;

10. The well annulus shall be backfilled with an appropriate clean filter pack adjacent to the slotted casing;

11. An annular seal shall extend from the top of the filter pack for 2 to 5 feet, where the depth to water will allow;

12. The well annulus shall be grouted from the top of the bentonite seal to the ground surface;

13. Monitoring wells shall have a watertight enclosure or cap with a grouted collar at the ground surface;

14. Monitoring wells shall be developed upon drilling until the water is clear and relatively sand free by over pumping, bailing, or surging with compressed air;

15. Monitoring wells shall be as close to the excavation zone as is technically feasible. If a monitoring well is located within the excavation zone, the base of the excavation zone shall not be penetrated.

16. If a continuous monitoring device is not used, manual monitoring shall consist of removal of fluid from the well, using a bailer, or a sampler of similar design. The fluid shall be taken from the surface of the water table. The fluid shall:

(i) Be poured into a clean, clear glass container kept for the purpose, and examined for signs of an oily layer or odor of pollutant; or

(ii) Be tested at the site; or

(iii) Be sent to a laboratory and tested.

17. A monitoring well must contain at least 6 inches of water or a sufficient depth to allow a sample to be obtained using a sampler selected in accordance with subparagraph (f)15. of this rule. If this requirement cannot be met for more than 30 days, the Department may require the monitoring well to be replaced, or another method of monitoring to be proposed to the Department for review.

18. The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the groundwater in the monitoring wells;

19. Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs (f)2. through 15. above and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the UST system that routinely contains product. This is to include an evaluation of the direction of the groundwater gradient at a site.

20. Monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering. Monitoring wells which are located in an area subject to traffic must be equipped with enclosures which will not be damaged by normal traffic.

21. In the event of permanent closure of the UST system, all monitoring wells shall be closed according to a method acceptable to the Department.

22. If a monitoring well is determined by the Department to be improperly constructed, closure may be required according to a method acceptable to the Department.

23. Existing groundwater monitoring wells which were completed prior to April 5, 1989 will be authorized for continued use if the Department determines that the minimum criteria of the federal UST regulations for monitoring wells are satisfied and the existing wells do not pose a threat of groundwater contamination due to poor construction.

(g) Interstitial Monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

1. For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

2. For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can in the determination of the Department, detect a release between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least  $10^{-6}$  cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The groundwater, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the groundwater and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

(vi) Monitoring wells are clearly marked with the wording "NOT FOR DELIVERIES" or other sufficient language and locked to avoid unauthorized access and tampering; and when located in areas which are subject to traffic must be equipped with enclosures which will not be damaged by normal traffic.

(vii) Monitoring wells extend to within 6 inches of the secondary barrier but shall not contact the barrier;

3. For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(h) Other methods. Any other type of release detection method, or combination of methods, can be used if:

1. It can detect a 0.2 gallon per hour leak rate ~~of or~~ a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

2. The Department may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subparagraphs (c) through (h) above. In comparing methods, the Department shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the ADEM on its use to ensure the protection of human health and the environment.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** August 6, 2007; XXXXXX, 2008.

**335-6-15-.18 Methods Of Release Detection For Piping.** Each method of release detection for piping used to meet the requirements of rule 335-6-15-.15 must be conducted in accordance with the following:

(a) Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. Systems which only trigger an audible or visual alarm must be modified to also include the ability to restrict or shut off the flow of regulated substances prior to August 6, 2008. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

(b) Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(c) Applicable tank methods. Any of the methods in rule 335-6-15-.17(e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** August 6, 2007.

**335-6-15-.19 Release Detection Recordkeeping.** All UST system owners and operators must maintain records in accordance with rule 335-6-15-.13 demonstrating compliance with all applicable requirements of this chapter. These records must include the following:

(a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years from the date of installation;

(b) The results of any sampling, testing, or monitoring must be maintained for at least 1 year except that the results of tank tightness testing conducted in accordance with rule 335-6-15-.17(c) must be retained until the next test is conducted; and

(c) Written documentation of all calibration, maintenance, and repair of release detection equipment must be maintained for at least one year after the servicing work is completed. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**335-6-15-.20 Reporting of Suspected Releases.** Owners and operators of UST systems must report suspected releases to the Department immediately upon discovery but in no case later than 24 hours following discovery, and follow the procedures in rule 335-6-15-.22 for any of the conditions identified in (a) through (c) below.

(a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area including but not limited to the presence of free or dissolved product or vapors in soils, groundwater, basements, sewer and utility lines, nearby surface water or a well contaminated with a regulated substance.

(b) Unusual operating conditions observed by owners and operators (including but not limited to the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless product dispensing equipment is found to be defective but not leaking, and is immediately repaired or replaced.

(c) Monitoring results from a release detection method required under rules 335-6-15-.15 and 335-6-15-.16 that indicate a release may have occurred unless:

1. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial results; or

2. In the case of inventory control, where the amount of calculated loss for a month is less than or equal to twice the sum of 1.0 percent of monthly flow-through plus 130 gallons, a second month of data does not confirm a loss of 1.0 percent of monthly flow-through plus 130 gallons.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**335-6-15-.21 Investigation Due to Environmental Impacts.** When required by the Department, owners and operators of UST systems must follow the procedures in rule 335-6-15-.22 to determine if the UST system is the source of environmental impacts, which include but are not limited to the discovery of regulated substances (such as the presence of free or dissolved product or vapors in soils, basements, sewer and utility lines, and nearby surface waters, or a well contaminated with a regulated substance that has been observed by the Department or brought to its attention by another party).

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**335-6-15-.22 Release Investigation and Confirmation Steps.** Unless corrective action is initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under rule 335-6-15-.20 within 7 days, or another reasonable time period specified by the implementing agency, using either the following steps or another procedure approved by the Department:

(a) System test. Owners and operators must conduct tests (according to the requirements for tightness testing in rules 335-6-15-.17(c) and 335-6-15-.18(b) that determine whether a leak exists in the tank, or the attached delivery piping, or both.

1. Owners and operators must repair, replace or upgrade the UST system, and begin corrective action if the test results for the system, tank, or delivery piping indicate that a leak exists.

2. The Department may release an owner or operator from any further investigation requirements if the tank tests tight after minor repairs to that portion of the tank that does not routinely contain product.

3. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.

4. Owners and operators must conduct a preliminary investigation as described in subparagraph (b) of this rule if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

(b) Preliminary investigation. Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of groundwater, and other factors appropriate for identifying the presence and source of the release. Specific requirements for a preliminary investigation are included in rule 335-6-15-.26.

1. If in the determination of the Department the results of the preliminary investigation indicate that a release has occurred, owners and operators must and initiate corrective action in accordance with rules 335-6-15-.24 through 335-6-15-.31. The Department may require a secondary investigation to be performed.

2. If in the determination of the Department the results of the preliminary investigation do not indicate that a release has occurred, further investigation is not required.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

### **335-6-15-.23 Reporting and Cleanup of Spills and Overfills.**

(1) Owners and operators of UST systems must contain and immediately clean up a spill or overfill and report to the Department within 24 hours, or another reasonable time period specified by the Department, and begin corrective action in accordance with rules 335-6-15-.24 through 335-6-15-.31 in the following cases:

(a) Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or another reasonable amount specified by the Department, or that causes a sheen on nearby surface water; and

(b) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR 302).

(2) Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons or another reasonable amount specified by the Department, and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, or another reasonable time period established by the Department, owners and operators must immediately notify the Department.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

### **335-6-15-.24 Initial Release Response.**

(1) Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of rules 335-6-15-.24 through 335-6-15-.31 except for USTs excluded under rule 335-6-15-.03(2) and UST systems subject to corrective action requirements under ~~chapter~~ division 14 of the ADEM Administrative Code.

(2) Upon confirmation of a release in accordance with rule 335-6-15-.22 or after a release is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the Department:

(a) Report the release to the Department (notification by telephone is acceptable);

(b) Take immediate action to prevent any further release of the regulated substance into the environment; and

(c) Identify and mitigate fire, explosion, and vapor hazards.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; [XXXXXX, 2008](#).

### **335-6-15-.25 Initial Abatement Measures and Preliminary Investigation.**

(1) Upon confirmation of a release in accordance with rule 335-6-15-.22 or after a release is identified in any other manner, unless directed to do otherwise by the Department, owners and operators must perform the following abatement measures:

(a) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

(b) Visually inspect any aboveground releases or exposed below ground releases and prevent further migration of the released substance into surrounding soils and groundwater;

(c) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

(d) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable ADEM and local requirements;

(e) Perform a preliminary investigation in accordance with rule 335-6-15-.26;

(f) Investigate to determine the possible presence of free product, and if found, begin free product removal as soon as practicable and in accordance

with rule 335-6-15-.27. Where free product is present, investigative and corrective actions must be initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31;

(g) Where dissolved groundwater contamination is determined to occur, for example, the contamination of an on-site well with a regulated substance, investigative and corrective actions must be initiated in accordance with rules 335-6-15-.24 through 335-6-15-.31;

(2) Within 20 days after release confirmation, or within another reasonable period of time determined by the Department, owners and operators must submit a report of initial response to the Department summarizing the initial abatement steps taken under paragraph (1) above, the nature and estimated quantity of the regulated substance lost, information regarding the presence of free or dissolved product, tightness testing results where applicable, or any other resulting information or data.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.26 Preliminary Investigation Requirements.**

(1) Unless directed to do otherwise by the Department, or under the conditions identified in paragraph (2) of this rule, owners and operators required to perform a preliminary investigation must obtain and provide information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in rule 335-6-15-.25. This information must include, but is not necessarily limited to the following:

- (a) Type of surrounding population, e.g., urban, rural, residential;
- (b) Results of a well inventory within 1000 feet of the site which includes the location, and where available, information on the depth and elevation and ownership of each well;
- (c) Location of any public water supply wells which are within 1 mile of the site;
- (d) A description of the hydrogeologic environment, including type and nature of geologic materials, location of surface waters, surrounding land and water users, and the location of all underground utilities, water lines, sewers or other conduits;
- (e) A determination of the uppermost aquifer and an initial evaluation of the potential for hydraulic interconnection with lower aquifers. This

evaluation at this stage may be made based upon the results of site soil sampling and borings and available literature data.

(f) Results of soil sampling collected from the area which is most likely to have been affected by a release of a regulated substance.

1. A sufficient number of soil samples shall be collected to accurately represent the area and depths affected by a release;

2. Soil sampling shall be performed to a depth which adequately represents the zone most likely to have been contaminated by a release.

3. Soil sampling shall be sufficient to determine if free product is present on the water table.

(g) Where soils are encountered which have a total petroleum hydrocarbon concentration of greater than 100 ppm and such soils extend to within 5 feet of the seasonal high water table, groundwater samples shall be collected and analyzed at a minimum of one up-gradient and three down-gradient locations unless directed to do otherwise by the Department.

(2) Upon approval by the Department, the following procedures may be used in satisfying the requirement for a preliminary investigation or closure assessment when the tank excavation pit is completely open and available for representative sample collection. If the conditions identified in (d)1. and 2. below cannot be met; however, the preliminary investigation requirements of paragraph (1) must be complied with, unless directed to do otherwise by the Department.

(a) Soil samples shall be collected from the sides and base of the tank pit. At least one sample shall be collected from each side of the pit and at least one sample from the pit bottom for every tank that was present in the excavation. Side samples shall be collected from the lowest one-third of the tank wall. One sample per 10 lineal foot shall be collected from the base of piping trenches. Samples from the tank pit sides, base, and piping trenches shall be representative of the area being sampled.

(b) Analyze soil samples for the presence of total petroleum hydrocarbons.

(c) Determine the elevation of the groundwater table. Information on the elevation of the water table may be obtained from a boring located adjacent to the tank pit or from a nearby location. Water table elevation data may also be obtained when topographical features provide surface indications of the water table, and this data is substantiated by literature values.

(d) If the conditions identified in 1. and 2. below are met, the Department may consider the investigation to be complete and no further action will be required. If the conditions identified in 1. and 2. below cannot be met,

the Department may require additional investigative actions or a preliminary investigation, in accordance with paragraph (1) of this rule, to be conducted.

| <u>Total Petroleum<br/>Hydrocarbon Concentration</u> | <u>Depth to<br/>Groundwater</u>              |
|--|--|
| 1. 100 ppm or less for each sample                   | 5 feet or more below base of tank excavation |
| 2. 10 ppm or less for every sample                   | No restrictions                              |

(3) Monitoring wells must be constructed in a manner acceptable to the Department or the Department may require them to be properly closed. Except where cross-contamination of aquifers is of concern, general construction details for monitoring wells should conform to the requirements of rules 335-6-15-.17(f)6. through 8. and 10. through 14. and 20., and where cross-contamination is of concern, monitoring well construction details must be reviewed in advance by the Department. The Department may require modification of proposed construction details.

(4) All samples shall be analyzed for parameters which are appropriate to the nature of the stored substance and according to the methods specified in rule 335-6-15-.32.

(5) Within 60 days of release confirmation, or notification by the Department that a Preliminary Investigation is required, under the conditions of paragraph (1) of this rule the owners and operators must submit the information collected in compliance with this rule to the Department in a manner that demonstrates its applicability and technical adequacy, or in a format and according to a schedule required by the Department. If the procedures under paragraph (2) of this rule apply, the results of the investigation must be submitted within 45 days of release confirmation or notification by the Department that an investigation is required.

(6) Preliminary investigation and closure site assessments must be performed in accordance with accepted geologic practices by a licensed professional geologist or registered professional engineer experienced in hydrogeologic investigations.

(7) Upon review of the results of the Preliminary Investigation, the Department may require a Secondary investigation to be completed in accordance with rule 335-6-15-.28.

(8) The Department may require additional sampling and analyses to be performed if it is determined that the number or location of samples, or methods used in the analysis of such samples are not sufficient to characterize the area and soil depths most likely to have been contaminated by a release.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007.

**335-6-15-.27 Free Product Removal.** At sites where investigations indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the Department while continuing, as necessary, any actions initiated under rules 335-6-15-.24 through 335-6-15-.26 or preparing for actions required under rules 335-6-15-.28 and 335-6-15-.29. In meeting the requirements of this section, owners and operators must:

(a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state and federal regulations;

(b) Use abatement of free product migration and removal of free product in a reasonable period of time as a minimum objective for the design of the free product removal system;

(c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(d) Unless directed to do otherwise by the Department, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides 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 where this discharge will be located;

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

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

(7) The disposition of the recovered free product.

(e) The Department may require additional measures to be taken to achieve free product recovery, if it is determined that the objectives of paragraphs (a) through (c) are not being accomplished.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**335-6-15-.28 Secondary Investigation Requirements.**

(1) When required in order to determine the full lateral and vertical extent and location of: soils contaminated by the release; the presence of free product; and the presence and concentrations of dissolved product contamination in the groundwater, the Department may require owners and operators to conduct a secondary investigation of the release site. This investigation must include the surrounding area possibly affected by the release if any of the following conditions exist:

(a) There is evidence that groundwater wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(b) Free product is found to need recovery in compliance with rule 335-6-15-.27;

(c) There is evidence that contaminated soils may be in contact with groundwater (e.g., as found during conduct of the initial response measures or investigations required under rules 335-6-15-.24 through 335-6-15-.26); and

(d) The Department requests an investigation, based on the potential effects of contaminated soil or groundwater on nearby surface water and groundwater resources.

(2) The investigations required by paragraph (1) of this rule shall:

(a) Be sufficient to define the full lateral and vertical extent of soil and groundwater contamination;

(b) Determine the rate and direction of pollutant and groundwater migration through the use of piezometers and/or monitoring wells;

(c) Include results of groundwater sampling and analysis from monitoring wells at one background and a minimum of three down-gradient locations. The location of the down-gradient wells should take into consideration the direction of groundwater flow and should be placed so as to define the plume of contamination and the outer limits of the plume of contamination.

(d) Include a determination of the uppermost aquifer and an initial evaluation of the potential for hydraulic interconnection with lower aquifers. This evaluation may be made based upon the results of site soil sampling and borings and available literature data but may also require installation of wells into underlying aquifers. If this becomes necessary proper well construction techniques must be used to ensure that wells do not serve as conduits for contamination of underlying aquifers.

(e) Include analytical results for soil and groundwater samples for parameters which are appropriate to the nature of the stored substance and according to methods specified in rule 335-6-15-.32.

(f) Provide sufficient information for the selection and design of appropriate corrective actions.

(3) The Department may require additional sampling and analyses to be performed if it is determined that the number or location of samples, or methods used in the analysis of such samples are not sufficient to define the full lateral and vertical extent of soil and groundwater contamination.

(4) Owners and operators must submit a plan of study sufficient to accomplish the objective of paragraphs (1) and (2) of this rule together with a schedule of implementation. The owners and operators shall make any modifications to the plan of study deemed necessary by the Department.

(5) The plan of study must contain construction details for monitoring wells. Monitoring wells must be constructed in a manner acceptable to the Department or the Department may require them to be properly closed. Except where cross-contamination of aquifers is of concern, general construction details for monitoring wells should conform to the requirements of rule 335-6-15-.17(f)6. through 8. and 10. through 14. and 20. The Department may require modification of proposed construction details.

(6) Owners and operators must submit the information collected under paragraphs (1) through (3) of this rule within the schedule submitted in (4) above or in accordance with a schedule established by the Department.

(7) The secondary site investigation must be performed in accordance with accepted geologic practices by a licensed professional geologist or registered professional engineer experienced in hydrogeologic investigations.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007.

**335-6-15-.29 Corrective Action Plan.**

(1) At any point after reviewing the information submitted in compliance with rules 335-6-15-.24 through 335-6-15-.28, the Department may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the Department. Alternatively, owners and operators may, after fulfilling the requirements of rules 335-6-15-.24 through 335-6-15-.28, choose to submit a corrective action plan for responding to contaminated soil and groundwater. In either case, 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, and must modify their plan as necessary to meet the requirements of the Department for achieving this standard.

(2) The corrective action plan must:

(a) Address the full lateral and vertical extent of soil and groundwater contamination;

(b) Address mitigation of soil contamination either through soil removal, or treatment in place, or another method which is determined by the Department to be no less protective of health and the environment, to standards identified in rule 335-6-15-.30;

(c) Provide for removal of free product in an effective and timely manner;

(d) Provide for treatment of dissolved groundwater contamination in an effective and timely manner to standards identified in rule 335-6-15-.30;

(e) Provide a rationale for selection of the proposed corrective actions and design criteria which address such items as equipment selection, flow rates and pumping rates;

(f) Address measures necessary to meet local, state or federal requirements for control of surface or air discharges or disposal of soil;

(g) Include a proposed schedule of implementation and monitoring plan.

(3) The Department will approve the corrective action plan only when satisfied that implementation of the plan provides for measures considered adequate to protect human health, safety, and the environment. In making this determination, the Department should consider the following factors as appropriate:

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

(b) The hydrogeologic characteristics of the [facilitysite](#) and the surrounding area;

(c) The findings of the preliminary and secondary investigations;

(d) The proximity, quality, and current and future uses of nearby surface water and groundwater;

(e) The potential effects of residual contamination on nearby surface water and groundwater;

(f) An exposure assessment conducted in accordance with rule 335-6-15-.30; and

(g) Any information assembled in compliance with this subpart.

(4) Upon approval of the corrective action plan or as directed by the Department, owners and operators must implement the plan, including modification to the plan made by or required to be made by the Department. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the Department.

(5) If at any time, the Department determines that the implementation of corrective actions are not achieving adequate protection of human health and the environment, the Department may require additional measures to be taken.

(6) Owners and operators shall continue implementation of the corrective action plan until released in writing from this responsibility by the Department.

(7) Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and groundwater before the corrective action plan is approved provided that they:

(a) Notify the Department of their intention to begin cleanup;

(b) Comply with any conditions imposed by the Department, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(c) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the Department for approval.

(8) Upon conclusion of investigative monitoring, or corrective actions at a site, the Department may require any or all monitoring wells to be properly closed.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; [XXXXXX, 2008](#).

**335-6-15-.30 Corrective Action Requirements.** The following requirements shall apply when establishing risk based corrective action limits applicable to the cleanup of soil and ground water contamination resulting from releases from underground storage tanks regulated under this chapter.

(a) A risk based corrective action process will be used to establish site specific corrective action limits protective of human health and the environment. Corrective action limits, institutional controls, or a combination thereof, shall be adequate to support onsite and surrounding property use consistent with existing and reasonable future use and achieve and maintain compliance with all applicable environmental standards for air, soil and waters of the state. The only exception to the use of a risk based corrective action process shall be that as described in 335-6-15-.30(f).

(b) Free product shall be removed to the maximum extent practicable.

(c) A risk based corrective action process requires the specification of a target risk level for carcinogenic effects. The estimated individual excess lifetime cancer risk (IELCR) will be:

1. For constituents resulting from releases of petroleum or petroleum-based regulated substances, as regulated under this chapter, the estimated IELCR level used to establish site specific corrective action limits shall be  $10^{-5}$ , for all constituents of concern, for each exposure pathway. If corrective action to a  $10^{-5}$  risk level is determined by the Department to be infeasible, and in the determination of the Department, appropriate institutional controls are implemented, the Department may approve a site-specific corrective action limit that represents a risk level equal to but not greater than  $10^{-4}$ .

2. For constituents resulting from releases of non-petroleum regulated substances, as regulated under this chapter, the estimated IELCR used to establish site specific corrective action limits shall be no less than  $10^{-6}$  and no greater than  $10^{-5}$ . If corrective action to a  $10^{-6}$  to  $10^{-5}$  risk level is determined by the Department to be infeasible, and in the determination of the department, appropriate institutional controls are implemented, the Department may approve a site specific corrective action limit that represents a risk level equal to but not greater than  $10^{-4}$ .

(d) For non-carcinogenic substances, a hazard quotient of one will be used.

(e) For the ground water ingestion pathway, for constituents for which a Maximum Contaminant Level, MCL, has been established, the corrective action limit shall be set equal to the MCL. For carcinogenic constituents for which a Maximum Contaminant Level has not been established, the estimated IELCR shall be  $10^{-6}$ .

(f) For hydrogeologic settings, where the models used in the risk based evaluations are considered in the determination of the Department, not to be representative of, and thus not protective of, a given hydrogeologic setting, the Department may require implementation of a corrective action plan to continue until the concentration of dissolved contaminants has leveled off. Leveling off shall mean that the graph of the contaminant concentration versus time fits a curve generally defined by the equation  $C = C_f + C_o e^{-kt}$ , and the slope of the final portion of the curve approaches zero. Alternatively, the Department may approve the use of a statistical method for use in demonstrating that contaminant concentrations are no longer decreasing with continued corrective action. An indicator parameter satisfactory to the Department shall be selected for application to the curve. In the equation above, the symbols are defined as follows:

1. C - contaminant concentration at time t;
2.  $C_f$  - the final concentration which the curve approaches asymptotically;
3.  $C_o$  - the concentration difference between the final concentration and the concentration at time zero;
4. e - 2.718, the base of natural logarithms;
5. k - an exponential factor which indicates how fast the concentration approaches  $C_f$ ;
6. t - time in days from some fixed starting point.

(g) Corrective action limits, institutional controls, or a combination thereof, shall be developed and submitted for approval by the Department, using a format, procedures, and within a schedule acceptable to the Department.

(h) Corrective action, institutional controls, or a combination thereof, shall be implemented, where necessary, to meet the objectives of this rule, within a schedule acceptable to the Department.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989. Repealed: August 28, 2003, Readopted: October 2, 2003.

**335-6-15-.31 Public Participation.**

(1) For each confirmed release that requires a corrective action plan, the Department must provide a 15 day notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or person contacts by field staff.

(2) The Department must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(3) Before approving a corrective action plan, the Department may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

(4) The Department must give public notice that complies with paragraph (1) above if implementation of an approved corrective action plan does not achieve the corrective action limits established in accordance with rules 335-6-15-.30 and termination of that plan is under consideration by the Department.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; [XXXXXX, 2008](#).

**335-6-15-.32 Analytical Requirements.** Soil and groundwater samples collected under the requirements of this chapter shall be analyzed according to the methods presented in this rule, as directed by the Department.

(a) Analysis of soils. Analysis of soils for petroleum contaminants shall be performed for the following parameters according to the type of petroleum product causing the contamination:

|  |  |
|--|--|
| 1. Total petroleum hydrocarbons                      | Standard Method 503<br>EPA Method 9071                       |
| 2. Benzene, ethyl benzene, toluene and total xylenes | EPA Method 5030 or 3810, followed by EPA Method 8020 or 8240 |
| 3. Lead  | EPA Method 239.2   |

(b) Gasoline analytical group. Analysis of groundwater or surface waters required by this chapter for petroleum contaminants of this group shall be performed for the following parameters according to the type of petroleum product causing the contamination.

|  |                       |
|--|-----------------------|
| 1. Volatile organic halocarbons (including priority pollutant compounds) | EPA Method 601        |
| 2. Benzene, ethyl benzene, toluene and total xylenes                     | EPA Method 602 or 624 |
| 3. 1, 2-Dibromoethane  | EPA Method 504.1      |
| 4. Lead  | EPA Method 239.2      |

(c) Kerosene Analytical Group. Analysis of groundwater or surface waters required by this chapter for petroleum contaminants of this group shall be performed for the following parameters according to the type of petroleum product causing the contamination.

Note: Kerosene, diesel and jet fuels are included in this group.

|   |                       |
|---|-----------------------|
| 1. Polynuclear aromatic hydrocarbons (PAH) (Including 15 priority pollutant PAH's plus 2-Methylnaphthalene and 1-Methylnaphthalene) | EPA Method 601 or 625 |
| 2. Benzene, ethyl benzene, toluene and total xylenes  | EPA Method 602 or 624 |
| 3. Volatile organic halocarbons (including priority pollutant compounds)  | EPA Method 601        |
| 4. 1, 2-Dibromoethane   | EPA Method 504.1      |
| 5. Lead   | EPA Method 239.2      |

(d) Monitoring of soil or groundwater for other than petroleum related regulated substances shall be according to established EPA analytical methods, where applicable.

(e) Where the results of initial analyses of soil or groundwater do not indicate the presence of a contaminant listed in subparagraphs (a) through (c)

above, or indicate that the presence of the contaminant is due to an ambient concentration, the Department may waive requirements for further testing for that contaminant.

(f) The Department may approve additional methods for the monitoring or investigation of regulated substances which have been released to soils, groundwaters or surface waters of the state.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.33 Temporary Closure.**

(1) When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with rule 335-6-15-.10, and any release detection in accordance with rules 335-6-15-.14 through 335-6-15-.19. Rules 335-6-15-.20 through 335-6-15-.25 must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

(2) When an UST system is temporarily closed for 3 months or more, owners and operators must also comply with the following requirements:

(a) Leave vent lines open and functioning; and

(b) Cap and secure all other lines, pumps, man ways, and ancillary equipment.

(c) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in rule 335-6-15-.06 for new UST systems or the upgrading requirements in rule 335-6-15-.07, except that the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems within 90 days from the end of this 12-month period in accordance with rules 335-6-15-.34 through 335-6-15-.37, unless the Department provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with rule 335-6-15-.26 before such an extension can be applied for.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.34 Permanent Closure and Changes-In-Service.**

(1) At least 30 days before beginning either permanent closure or a change-in-service of an UST system under paragraph (2) and (3) below, or within another reasonable time period determined by the Department, owners and operators must notify the Department of their intent to permanently close or make the change-in-service, and the method of proposed closure, unless such action is in response to corrective action. The required assessment of the excavation zone under rule 335-6-15-.35 must be performed after notifying the Department but before completion of the permanent closure or change-in-service. Upon completion, a notice of final closure or change-in-service must be submitted to the Department.

(2) To permanently close an UST system, owners and operators must:

(a) Empty and clean underground storage tanks by removing all liquids and accumulated sludges and either remove from the ground or leave in place and fill with an inert solid material.

(b) Empty underground piping by removing all liquids and either remove from the ground or cap and leave in place.

(c) Cap or remove all lines, manways, and/or other connections.

(d) Conduct a site assessment when an underground storage tank and/or piping is permanently closed in accordance with paragraph (1) above.

(3) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the UST system by removing all liquid and accumulated sludge and conduct a site assessment in accordance with paragraph (1) above.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; August 6, 2007.

**335-6-15-.35 Site Closure or Change-In-Service Assessment.**

(1) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site according to procedures which are acceptable to the Department. In selecting sample types,

sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release. A report of the assessment findings shall be submitted to the Department within 45 days of initiating the closure or the change-in-service. The assessment requirements of this paragraph are satisfied if the requirements of rule 335-6-15-.26(1)(f) and (g) or (2) are satisfied or one of the external release detection methods allowed in rule 335-6-15-.17(e) and (f) and rule 335-6-15-.18 have been routinely used and operated in accordance with the requirements in rules 335-6-15-.17 and 335-6-15-.18 at the time of closure, and indicates no release has occurred.

(2) If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered under paragraph (1) above, or by any other manner, owners and operators must begin corrective action in accordance with rules 335-6-15-.24 through 335-6-15-.31.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.36 Applicability to Previously Closed UST Systems.** When directed by the Department, the owner and operator of an UST system permanently closed before April 5, 1989 must assess the excavation zone and close the UST system in accordance with rules 335-6-15-.34 and 335-6-15-.35 if releases from the UST may, in the judgment of the Department, pose a current or potential threat to human health and the environment.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.37 Closure Records.** Owners and operators must maintain records in accordance with rule 335-6-15-.13 that are capable of demonstrating compliance with closure requirements under rules 335-6-15-.33 through 335-6-15-.36. The results of the excavation zone assessment required in rule 335-6-15-.35 must be submitted to the Department and be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the UST system out of service;

(b) By the current owners and operators of the UST system site.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.38 Alternate or Temporary Drinking Water Source.** Where an owner or operator is responsible for polluting a drinking water source beyond applicable standards, or where no standard exists, such standard as the Director shall determine, the Department may require the owner or operator to provide an alternate or temporary drinking water source to any person deprived of drinking water.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.39 Availability to Public of Records, Reports or Information.** Any records, reports, or information obtained under this chapter shall be available to the public; except that upon a showing satisfactory to the Department by any person that records, reports or information, or a particular part thereof to which the department has access under this chapter if made public, would divulge production or sales figures or methods, processes or production unique to such person or would otherwise tend to affect adversely the competitive position of such person by revealing trade secrets, the Department shall consider such record, report, or information or particular portion thereof, confidential. Nothing in this paragraph shall be construed to prevent disclosures of such report, record, or information to federal or state representatives as necessary for purposes of administration of any federal or state laws or when relevant to proceedings under this chapter. Information concerning the presence or concentration of substances in waters shall not be considered confidential by the Department (Acts 1988, No. 88-537, § 8.)

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-8.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.40 Access to Records.** Any owner or operator of an underground storage tank shall upon request of a duly authorized representative of the Department, permit the representative, at all reasonable times, access to all records concerning the storage of regulated substances and permit the representative to copy said records.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-4.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.41 Entry and Inspection of Facilities.** Any owner or operator of an underground storage tank shall upon request of a duly authorized representative of the Department, permit the representative to enter, at all reasonable times, property and buildings where an underground storage tank is located and allow the representative to inspect facilities and equipment and to conduct monitoring and sampling.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-4.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.42 Underground Storage Tank Regulation Fee.** Any owner of an underground storage tank shall pay a yearly Underground Storage Tank Regulation Fee of not less than \$15.00 and not more than \$30.00 per regulated tank per year. The amount of the fee shall be determined annually by the Director. Payment of the fee shall be due within 30 days of notification to the owner by the Department of the amount of such fee.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-5.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.43 Financial Responsibility for Petroleum UST Owners and Operators.** 40 CFR Part 280 §§ 280.90 through 280.112 is hereby adopted by reference. This rule sets forth the amounts of financial responsibility required of petroleum UST owners and operators and the mechanisms allowed for satisfying these requirements. Copies of this rule are available from ADEM. Charges for reproduction apply.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003.

**335-6-15-.44 Financial Responsibility for Hazardous Substance UST Owners and Operators.** (Reserved)

**335-6-15-.45 Delivery Prohibition.** The Department will implement Delivery Prohibition in accordance with the following procedures:

(a) Prior to placing an underground storage tank facility under delivery prohibition, the Department will:

1. Make a reasonable effort to notify the owner and/or operator in writing that an underground storage tank facility is in "significant noncompliance requiring delivery prohibition" as defined in rule 335-6-15-.02(eee), or "significant noncompliance subject to delivery prohibition" as defined in rule 335-6-15-.02(fff).

2. Give the owner or operator the opportunity to discuss, within a designated time period specified by the Department, the significant noncompliance.

(b) If the above time period expires without resolution of the significant noncompliance, the underground storage tank facility will be prohibited from regulated substance delivery by placing it on the Department web site "delivery prohibition list" as described in subparagraph (d) below. The Department may also physically affix a red tag on the fill pipes to all underground storage tanks at the underground storage tank facility prohibited from regulated substance delivery at any time during the delivery prohibition period. Once the red tag is affixed on the fill pipe, it shall be unlawful to tamper with or remove it until authorized by the Department.

(c) Upon implementation of delivery prohibition as described in subparagraph (b) above, it shall be unlawful for any regulated substance deliverer to deliver a regulated substance, and it shall be unlawful for owners and operators of UST systems to accept delivery of a regulated substance to an underground storage tank facility that is under delivery prohibition.

(d) An underground storage tank facility will be added to the Department web site "delivery prohibition list" by 12:00 a.m. central time on Wednesday of the week that a delivery prohibition determination is made by the Department. The delivery prohibition becomes effective at 12:00 a.m. Wednesday.

(e) When the Department has received all documentation required by the Department to demonstrate that the underground storage tank facility has returned to compliance:

1. The underground storage tank facility will become eligible to receive delivery of regulated substances following written notification by the Department. Written notification may be provided electronically or by facsimile.

2. The Department shall remove the underground storage tank facility from the Department web site "delivery prohibition list" and add it to the "delivery prohibition removed list" as soon as practicable after receipt of the

necessary documentation. The underground storage tank facility will remain on the "delivery prohibition removed list" for a period of approximately one month.

(f) Based on the best interest of the public, the Department may defer the implementation of delivery prohibition for up to 180 days for underground storage tank facilities identified as being in significant noncompliance requiring delivery prohibition. Also, the Department retains the right to remove any delivery prohibition at any time during an emergency situation.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** XXXXXX, 2008.

**Amended:**

**335-6-15-.4546 Severability.** If any paragraph, subparagraph, provision, clause or portion of this chapter is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected thereby.

**Author:** Sonja Massey.

**Statutory Authority:** Code of Alabama 1975, § 22-36-3.

**History:** April 5, 1989.

**Amended:** October 2, 2003; XXXXXX, 2008.