1301:7-9-01 **Applicability.**

(A) For the purpose of prescribing rules pursuant to section 3737.02 and section 3737.882 of the Revised Code, the state fire marshal hereby adopts this chapter in accordance with Chapter 119 of the Revised Code to implement the underground storage tank program and corrective action program for releases from underground petroleum storage tanks. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Nothing in this chapter shall exempt owners and operators of underground storage tank systems from complying with any other applicable federal, state or local laws and regulations, including but not limited to the "Ohio Fire Code" as the term is defined paragraph (A)(1) of rule 1301:7-7-01 of the Administrative Code or the "Ohio Building Code" as the term is defined in paragraph 101.1 of rule 4101:1-1-01 of the Administrative Code. If the provisions of the "Ohio Fire Code" address similar requirements or are in conflict with the requirements of this chapter, then the provisions of this chapter shall apply.

(C) Airport hydrant fuel distribution systems, underground storage tank (UST) systems with field constructed tanks, and UST systems that store fuel solely for use by emergency generator systems that were previously deferred from parts of this chapter shall meet the following requirements of this chapter:

(1) Airport hydrant fuel distribution systems and UST systems with field constructed tanks that were installed before the effective date of this rule shall comply with the following:

(a) Upon the effective date of this rule, the requirements identified in rules 1301:7-9-12 and 1301:7-9-13 of the Administrative Code;

(b) Within ninety days of the effective date of this rule, the requirements identified in rules 1301:7-9-04 and 1301:7-9-05 of the Administrative Code; and

(c) By October 13, 2018, the requirements identified in rules 1301:7-9-06, 1301:7-9-07, and 1301:7-9-19 of the Administrative Code;

(2) Airport hydrant fuel distribution systems and UST systems with field constructed tanks that were installed on or after the effective date of this rule shall meet the requirements of this chapter;

(3) UST systems that store fuel solely for use by emergency generator systems that were installed before May 16, 2011, shall meet the requirements of this chapter, except that the release detection requirements of paragraph (C)(6) of rule 1301:7-9-07 of the Administrative Code shall be met by October 13, 2018; and

(4) UST systems that store fuel solely for use by emergency generator systems that were installed on or after May 16, 2011, shall meet the requirements of this chapter.

(D)~~**(C)**~~ The following underground storage tank systems are exempt from the requirements of this chapter:

(1) Any UST system holding hazardous wastes listed or identified under chapter 3745-51 of the Administrative Code, or a mixture of such hazardous wastes and other regulated substances;

(2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the federal Water Pollution Control Act (33 U.S.C.A. 1251 et seq., as amended through ~~January 7, 2011~~ January 16, 2014);

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

(4) Any UST system whose capacity is one hundred ten gallons or less;

(5) Any UST system containing a de minimis concentration of regulated substances; and

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

(E) The following storage tank systems are partially excluded from this chapter; however, the storage tank systems shall meet the requirements of this rule and of rule 1301:7-9-13 of the Administrative Code:

(1) Wastewater treatment tank systems that are not part of a wastewater treatment facility regulated under section 402 or 307(b) of the federal Water Pollution Control Act (33 U.S.C.A. 1251 et seq., as amended through January 16, 2014);

(2) Aboveground storage tanks associated with:

(a) Airport hydrant fuel distribution systems referenced under paragraph (F) of rule 1301:7-9-06 and paragraph (H) of rule 1301:7-9-07 of the Administrative Code; or

(b) UST systems with field-constructed tanks referenced under paragraph (F) of rule 1301:7-9-06 and paragraph (H) of rule 1301:7-9-07 of the Administrative Code;

(3) UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C.A. 2011 et seq., as amended through January 16, 2014); and

(4) UST systems that are part of an emergency generator system at nuclear power generation facilities licensed by the nuclear regulatory commission and subject to nuclear regulatory commission requirements regarding design and quality criteria, including but not limited to 10 C.F.R. part 50.

(F)~~(D) Notwithstanding paragraphs (A)(1) to (A)(5) of rule 1301:7-9-06 of the Administrative Code, no~~ No owner or operator shall install an UST system listed in paragraphs (E)(1), (E)(3), or (E)(4) of this rule ~~paragraphs (A)(1) to (A)(5) of rule 1301:7-9-06 of the Administrative Code~~ for the purpose of storing a regulated substance unless the UST system complies with all of the following:

(1) The UST system is installed and constructed in such a manner so as to prevent releases of the regulated substance due to corrosion or structural failure for the operational life of the UST system;

(2) The UST system is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent a release or threatened release of any stored substance; and

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

(G) Where any provision in this chapter creates a duty of compliance for an owner and operator, and the owner and operator are separate persons, compliance may be attained by either person. In the event of noncompliance, both are liable.

1301:7-9-02 **Definitions.**

NOTE: For review purposes only, the new definitions have been inserted in proper alphabetical order but the overall set of definitions has not been renumbered; the rule-writing software automatically performs that task.

(A) Purpose.

For the purpose of prescribing rules pursuant to sections 3737.88 to 3737.882 of the Revised Code, the state fire marshal hereby adopts this rule to establish definitions of words and phrases related to underground storage tanks. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Definitions.

When used in this chapter of the Administrative Code, the following terms shall have the meanings given below:

(1) “Accredited laboratory” means a laboratory accredited to perform laboratory analyses as outlined in this chapter of the Administrative Code using prescribed ~~**USEPA**~~ **United States environmental protection agency** test methods through one of the following programs:

(a) Ohio Environmental Protection Agency Division of Drinking and Ground Waters;

(b) Ohio Environmental Protection Agency Voluntary Action Program;

(c) National Environmental Laboratory Accreditation Program;

(d) American Association of Laboratory Accreditation; or,

(e) another state environmental protection agency program approved by the state fire marshal.

(XX) "Airport hydrant fuel distribution system (also called airport hydrant system)" means an UST system which fuels aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants (fill stands). The airport hydrant system begins where fuel enters one or more tanks from an external source such as a pipeline, barge, rail car, or other motor fuel carrier.

(2) "Ancillary equipment" means any devices including, without limitation, 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.

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

~~**(4) "Bureau chief" means the chief of the bureau of underground storage tank regulations within the division of the state fire marshal.**~~

(5) "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. An UST system can be cathodically protected, without limitation, through the application of either galvanic anodes or impressed current.

(6) "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 UST systems. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and UST systems.

(7) "Certified installer" or "installer" means an individual certified by the **state** fire marshal under the requirements of rule 1301:7-9-11 of the Administrative Code to supervise the installation of, performance of major repairs on site to, closure-in-place of, removal of, performance of modifications of, placing out of service for more than ninety days of, or the change in service of UST systems.

(8) "Certified UST inspector" means an individual certified by the **state** fire marshal under the requirements of rule 1301:7-9-15 of the Administrative Code to inspect the installation of, performance of major repairs on site to, closure-in-place of, removal of, performance of modifications of, placing out of service for more than ninety days of, or the change in service of UST systems.

(9) "Change in service" means a change in the substances managed in the UST system from regulated substances to non-regulated substances, without closure in place or permanent removal of the UST system.

(XX) "Change of product" means a change in the substances stored in the UST system from one regulated substance to another regulated substance containing greater than ten percent ethanol or containing greater than twenty percent biodiesel.

(10) "Closure-in-place" or "close-in-place" means the abandonment of an UST system by permanently taking an UST system out of service but not out of the ground in compliance with this chapter of the Administrative Code.

(11) "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 UST system under conditions likely to be encountered in the UST.

(12) "Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to an UST 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.

(13) "Consumptive use" with respect to heating fuel means consumed on the premises.

(XX) "Containment sump" means a liquid-tight container that protects the environment by containing leaks and spills of regulated substances from piping, dispensers, pumps and related components in the containment area. Containment sumps may be single walled or secondarily contained and located at the top of tank (tank top or submersible turbine pump sump), underneath the dispenser (under-dispenser containment sump), or at other points in the piping run (transition or intermediate sump).

(14) "Corrective action" means any action necessary to protect human health and the environment in the event of a release of petroleum into the environment, including, without limitation, any action necessary to monitor, assess, and evaluate the release. In the instance of a suspected release, the term includes, without limitation, an investigation to confirm or disprove the occurrence of the release. In the instance of a confirmed release, the term includes, without limitation, the initial corrective action taken under section 3737.88 or 3737.882 of the Revised Code, or orders issued under those sections, and any initial corrective action taken under this chapter of the Administrative Code and any action taken consistent with a remedial action to clean up contaminated ~~ground water~~ groundwater, surface water, soils, and subsurface material and to address the residual effects of a release after the initial corrective action is taken.

(15) "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 shall 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.

(16) "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.

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

(18) "Excavation zone" means the volume containing the UST 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.

(19) "Existing UST system" means an UST system used to contain an accumulation of regulated substances or for which installation has commenced on or before the effective date of this rule. Installation is considered to have commenced if:

(a) 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 UST system; and if,

(b) One of the following has occurred:

(i) ~~Either a~~ A continuous on-site physical construction or installation program has begun; or,

(ii) 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 UST system to be completed within a reasonable time.

(20) "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 shall be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

(XX) "Field-constructed tank" means an UST constructed on site in the field, such as an UST constructed of concrete that is poured in the field, or a steel or fiberglass UST primarily fabricated in the field.

(21) "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.

(22) "Free product" means a separate liquid hydrocarbon phase that has a measured thickness of greater than one one-hundredth of a foot.

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(23) "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.

(24) "Hazardous substance" means any substance listed in rule 1301:7-9-03 of the Administrative Code, but not including any substance regulated as a hazardous waste under Chapters 3745-50 to 3745-69 of the Administrative Code, or any mixture of such substance and petroleum which is not contained in a petroleum UST system.

(25) "Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance.

(26) "Heating fuel" 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, without limitation, Navy Special Fuel Oil and Bunker C; and other fuels when used as substitutes for one of these fuel oils. Heating fuel is typically used in the operation of heating equipment, boilers, or furnaces.

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

(28) "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.

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

(30) "Major repair" means the restoration of a tank or an underground storage tank system component that has caused a release of a product from the underground storage tank system. "Major repair" does not include modifications, upgrades, or routine maintenance for normal operational upkeep to prevent an underground storage tank system from releasing a product.

(31) "Modification" means work performed on UST system components that have not leaked such as adding, altering, replacing, or retrofitting the following:

(a) USTs and any components fixed to UST openings;

(b) Containments located over USTs, under dispensers or at intermediate points ~~excluding spill prevention equipment~~;

(c) Piping components that routinely contain regulated substances;

(d) Underground vent lines excluding stage two vapor recovery components;

(e) Flexible connector lines ~~located outside of accessible containments~~;

(f) UST system lining components; ~~and~~

(g) Release detection systems~~.~~;

(h) Spill prevention equipment; and

(j) Shear valves (any portion).

(32) "Motor fuel" means a complex blend of hydrocarbons typically used in the operation of a motor engine, ~~petroleum or a petroleum based substance that is~~ such as motor gasoline, aviation gasoline, racing fuel, No. 1 or No. 2 diesel fuel, or any blend ~~grade~~ containing one or more of these substances. (For example: motor gasoline blended with alcohol.) ~~of gasohol, and is typically used in the operation of a motor engine~~.

(33) "Native soils" means any soil or other materials outside of the backfill material used at the time of the original installation of the UST system.

(34) "New UST system" means an UST system that will be used to contain an accumulation of regulated substances and for which installation has commenced after the effective date of this rule.

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

(36) "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.

(37) "Operational life" refers to the period beginning when installation of the UST system has commenced until the time the UST system is properly closed under this chapter.

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

(39) "Out of service" means the normal operation and use of the UST system or any portion of the UST system is discontinued.

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

(41) "Owner" means:

(a) In the instance of an underground storage tank system in use on November 8, 1984, or brought into use after that date, the person who owns the underground storage tank system;

(b) In the instance of an underground storage tank system in use before November 8, 1984, but no longer in use on that date, the person who owned the underground storage tank system immediately before the discontinuation of its use.

The term includes any person who holds, or, in the instance of an underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who held immediately before the discontinuation of its use, a legal, equitable, or possessory interest of any kind in an underground storage tank system or in the property on which the underground storage tank system is located, including, without limitation, a trust, vendor, vendee, lessor, or lessee. The term does not include any person who, without participating in the management of an underground storage tank system and without otherwise being engaged in petroleum production, refining, or marketing, holds indicia of ownership in an underground storage tank system primarily to protect the person's security interest in it.

(42) "Permanent removal" means permanently taking an UST system or any of its components out of service by taking it out of the ground in compliance with this chapter.

(43) "Person", in addition to the meaning in section 3737.01 of the Revised Code, means the United States and any department, agency, or instrumentality thereof.

(44) "Petroleum" means petroleum, including crude oil or any fraction thereof, that is a liquid at the temperature of sixty degrees Fahrenheit and the pressure of ~~fourteen and seven-tenths~~ 14.7 pounds per square inch absolute. The term includes, without limitation, motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

(45) "Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances.

(46) "Pipe" or "piping" means a hollow cylinder or tubular conduit that is constructed of man-made materials.

(47) "Pipeline facilities" are new and existing pipe rights-of-way and any associated equipment, including, without limitation, gathering lines; facilities; or buildings.

(48) "Political subdivision" means a municipal corporation, township, county, school district, or other body corporate and politic responsible for governmental activities in a geographic area smaller than that of the state.

(49) "Regulated substance" means:

(a) Any hazardous substance; and

(b) Petroleum.

(50) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing of a petroleum product from an UST system into ~~ground water~~ groundwater, a surface water body, subsurface soil or otherwise into the environment.

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

(52) "Residential tank" is a tank located on property used primarily for dwelling purposes **such as homes, apartments, nursing homes and assisted living facilities**.

(53) "Routine maintenance or normal operational upkeep" means work performed to maintain or to prevent an underground storage tank system from releasing a regulated substance. Work on the following components shall constitute routine maintenance or normal operational upkeep on existing UST systems provided that the component has not caused a release:

(a) Drop tubes;

(b) Overfill **prevention** ~~containment~~ devices;

~~(c) Spill prevention equipment;~~

(c)~~(d)~~ Fill caps and adapters;

(d)~~(e)~~ Cathodic protection components;

(e)~~(f)~~ Stage one vapor recovery components;

(f)~~(g)~~ Submersible pump components; **and**

(g)~~(h)~~ Individual leak detection monitoring units, probes, sensors or line leak detectors that are maintained with like components~~;~~

~~(i) Flexible connector lines located inside of accessible containments; and~~

~~(j) Shear valves~~.

(XX) "Secondary containment" or "secondarily contained" means a release prevention and release detection system for an UST or piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of piping.

(54) "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.

(XX) "Sole source aquifer" means any aquifer which has been so designated by the administrator of the United States environmental protection agency pursuant to section 1424(e) of the Safe Drinking Water Act (42 U.S.C.A. 300h, as amended through January 16, 2014).

(55) "Spill" means:

(a) a release resulting from improper transfer practices to an UST system including, without limitation, the disconnecting of a delivery hose from a tank's fill pipe before the hose has drained completely, or

(b) any spilling, leaking, emitting, discharging, escaping, or disposal of a petroleum product into

~~ground water~~ **groundwater**, a surface water body, subsurface soil or otherwise into the environment while transferring or attempting to transfer petroleum products into an UST system.

(56) "Spill prevention equipment" means a spill containment manhole or spill bucket installed at a fill pipe that catches and holds drips and spills of regulated substance that can occur when a delivery hose is removed from the fill pipe after delivery of a regulated substance to an UST.

(57) "State" means the state of Ohio, including, without limitation, the general assembly, the supreme court, the offices of all elected state officers, and all departments, boards, offices, commissions, agencies, colleges, universities, institutions, and other instrumentalities of the state of Ohio. "State" does not include political subdivisions.

(58) "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.

(59) "Supervise" means being physically on site and having the authority to direct other persons engaged in carrying out the installation of, making major repairs on site to, closure-in-place of, removal of, performance of modifications of, placing out of service for more than ninety days of, or the change in service of UST systems as well as having the authority to exercise independent judgment regarding the recommendation of activities to such other persons.

(60) "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.

(61) "Tank" is a stationary device designed to contain an accumulation of regulated substances that is constructed of man-made materials.

(62) "Temporarily out of service" means the normal operation and use of the UST system is deliberately, but temporarily, discontinued for ninety days or less.

(63) "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.

(64) "Underground storage tank" or "UST" means one or any combination of tanks, including the underground pipes connected thereto, that are used to contain an accumulation of regulated substances the volume of which, including the volume of the underground pipes connected thereto, is ten per cent or more beneath the surface of the ground.

The term does not include any of the following:

(a) Pipeline facilities, including gathering lines, regulated under the "Natural Gas Pipeline Safety Act of 1968," 82 Stat. 720, 49 U.S.C.A. 2001, as amended;

(b) Farm or residential tanks of one thousand one hundred gallons or less capacity used for storing motor fuel for noncommercial purposes;

(c) Tanks used for storing heating fuel for consumptive use on the premises where stored;

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

(e) Storm or waste water collection systems;

(f) Flow-through process tanks;

(g) Storage tanks located in underground areas, including without limitation, basements, cellars, mine workings, drifts, shafts, or tunnels, when the tanks are located on or above the surface of the floor;

(h) Septic tanks;

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

(65) "Underground storage tank system" or "UST system" means an underground storage tank and the connected underground piping, underground ancillary equipment, and containment system, if any.

(66) “UST site” means the parcel of property where an UST system is or was formerly located.

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

1301:7-9-03 **Reporting requirements for hazardous substances and list of hazardous substances.**

(A) Purpose.

For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the **state** fire marshal hereby adopts this rule to establish reporting requirements for underground storage tank systems that contain hazardous ~~substance(s)~~ **substances** and to list those substances which are hereby identified as hazardous substances. This rule is adopted by the **state** fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code".

(B) Definitions.

For the purpose of this rule:

(1) "Release of a hazardous substance" means:

(a) Any spilling, leaking, emitting, discharging, escaping, leaching or disposing of a hazardous ~~substance(s)~~ **substance** from an underground storage tank system into the **groundwater** ~~ground water~~, a surface water body, subsurface soils or otherwise into the environment;

(b) Any spilling, leaking, emitting, discharging, escaping, or disposing of a hazardous ~~substance(s)~~ **substance** into **groundwater** ~~ground water~~, a surface water body, subsurface soils or otherwise into the environment while transferring or attempting to transfer a hazardous ~~substance(s)~~ **substance** into an underground storage tank system; or

(c) Contamination of subsurface soils or **groundwater** ~~ground water~~ on the UST site by a hazardous ~~substance(s)~~ **substance** found and confirmed through laboratory analysis of samples from the UST site.

(2) "Suspected release of a hazardous substance" means evidence of a release of a hazardous ~~substance(s)~~ **substance** obtained through one or more of the following events:

(a) The monitoring results from a release detection method required by rule 1301:7-9-07 of the Administrative Code that a release of a hazardous ~~substance(s)~~ **substance** may have occurred unless:

(i) The monitoring device is found to be defective, and is immediately recalibrated or replaced, and additional monitoring does not confirm the initial result; or

(ii) In the case of inventory control, a second month of data does not confirm the initial result;

(b) Unusual operating conditions observed by the owners and operators unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced. Such unusual operating conditions shall include, without limitation, the erratic behavior of hazardous ~~substance(s)~~ **substance** dispensing equipment, the sudden loss of hazardous ~~substance(s)~~ **substances** from the UST system or an unexplained presence of water in the tank~~.~~**;**

(c) The presence of free hazardous ~~substance(s)~~ **substances** discovered during removal of an UST system or part thereof or in an excavation on the UST site or on property nearby the UST site;

(d) The discovery of hazardous ~~substance(s)~~ **substance** vapors within or along building foundations or other subsurface manmade structures such as building foundations, basements, pedestrian tunnels, utility vaults, sewer lines, or the like, or in a drinking water well located on the UST site or on property nearby the UST site;

(e) The presence of free hazardous ~~substance(s)~~ **substances** in a monitoring or an observation well located on the UST site or on property nearby the UST site; ~~or~~

(f) The presence of hazardous ~~substance(s)~~ **substances** observed on a surface water body located on the UST site or on property nearby the UST site suspected to have arisen from a release from an UST system~~.~~**; or**

(g) The presence of free hazardous ~~substance(s)~~ **substances** discovered in an UST secondary containment system on the UST site.

(C) Reporting of releases of a hazardous substance and suspected releases of a hazardous substance.

(1) Owners and operators shall report a release of a hazardous substance or suspected release of a hazardous substance to the **state** fire marshal and the local fire department within twenty-four hours of discovery by the owner or operator. Spills or overfills of twenty-five gallons or less that do not reach a surface water body and that are cleaned up within twenty-four hours need not be reported.

(2) ~~Complying~~ **Compliance** with paragraph (C)(1) of this rule does not relieve the owners and operators from complying with any other applicable federal, state, or local reporting requirements, laws, or regulations.

(D) **Hazardous substances shall include a mixture of a hazardous substance and petroleum which is not contained in a petroleum UST system.**

(E) The substances listed in the following table are hazardous substances except that any listed substance regulated as a hazardous waste under Chapters 3745-50 to 3745-69 of the Administrative Code shall not be considered a hazardous substance for the purposes of this chapter. The numbers to the right of the substances are the chemical abstracts service registry numbers for the substances. **Entries on the table written in all capital letters represent generic categories and any substance that belongs to such a category, whether listed individually or not, is considered to be a hazardous substance.**

Acenaphthene	83329
Acenaphthylene	208968
Acetaldehyde	75070
Acetaldehyde, chloro	107200
Acetaldehyde, trichloro	75876

Acetamide	60355
Acetamide, N- (aminothioxomethyl)-	591082
Acetamide, N- (4-ethoxyphenyl)-	62442
Acetamide, N-9H-fluoren-2-yl-	53963
Acetamide, 2-fluoro-	640197
Acetic acid	64197
Acetic acid, ethyl ester	141786
Acetic acid, fluoro-, sodium salt	62748
Acetic acid, lead salt	301042
Acetic acid, thalium(l) salt	563688
Acetic anhydride	108247
Acetimidic acid, N-(methylcarbomoyl) oxy] thio, methyl ester	16752775
Acetone	67641
Acetone cyanohydrin	75865
Acetonitrile	75058
3-(alpha-Acetonylbenzyl)-4- hydroxycoumarin and salts	81812
Acetophenone	98862
2-Acetylaminofluorene	53963
Acetyl bromide	506967
Acetyl chloride	75365
1-Acetyl-2-thiourea	591082
Acrolein	107028
Acrylamide	79061
Acrylic acid	79107
Acrylonitrile	107131
Adipic acid	124049
Alanine, 3-[p-bis(2-chloroethyl)amino] phenyl-,L-	148823
Aldicarb	116063
Aldrin	309002
Allyl alcohol	107186
Allyl chloride	107051
Aluminum phosphide	20859738
Aluminum sulfate	10043013
4-Aminobiphenyl	92671
5-(Aminomethyl)-3-isoxazolol	2763964
4-Aminopyridine	504245
Amitrole	61825
Ammonia	7664417
Ammonium acetate	631618
Ammonium benzoate	1863634
Ammonium bicarbonate	1066337

Ammonium bichromate	7789095
Ammonium biflouride	1341497
Ammonium bisulfite	10192300
Ammonium carbamate	1111780
Ammonium carbonate	506876
Ammonium chloride	12125029
Ammonium chromate	7788989
Ammonium citrate, dibasic	3012655
Ammonium fluoborate	13826830
Ammonium fluoride	12125018
Ammonium hydroxide	1336216
Ammonium oxalate	6009707
	5972736
	14258492
Ammonium picrate	131748
Ammonium silcofluoride	16919190
Ammonium sulfamate	7773060
Ammonium sulfide	12135761
Ammonium sulfite	10196040
Ammonium tartrate	14307438
	3164292
Ammonium thiocyanate	1762954
Ammonium vanadate	7803556
Amyl acetate	628637
iso-	123922
sec-	626380
tert-	625161
Aniline	62533
o-Anisidine	90040
Anthracene	120127
Antimony**	7440360
ANTIMONY & COMPOUNDS	
Antimony pentachloride	7647189
Antimony potassium tartrate	28300745
Antimony tribromide	7789619
Antimony trichloride	10025919
Antimony trifluoride	7783564
Antimony trioxide	1309644
Aroclor 1016	12674112
Aroclor 1221	11104282
Aroclor 1232	11141165

Aroclor 1242	53469219
Aroclor 1248	12672296
Aroclor 1254	11097691
Aroclor 1260	11096825
Arsenic**	7440382
Arsenic acid	1327522
	7778394
ARSENIC & COMPOUNDS	
Arsenic disulfide	1303328
Arsenic (III) oxide	1327533
Arsenic (V) oxide	1303282
Arsenic pentoxide	1303282
Arsenic trichloride	7784341
Arsenic trioxide	1327533
Arsenic trisulfide	1303339
Arsine, diethyl-	692422
Asbestos***	1332214
Auramine	492808
Azaserine	115026
Aziridine	151564
Azirino (2',3':3,4) pyrrolo(1,2-a) indole-4,7-dione,6-amino-8-[((aminocarbonyl) oxy)methyl] -1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-	50077
Barium cyanide	542621
Benz(j)aceanthrylene, 1,2 dihydro-3-methyl	56495
Benz(c)acridine	225514
3,4-Benzacridine	225514
Benzal chloride	98873
Benz(a)anthracene	56553
1,2-Benzanthracene	56553
1,2-Benzanthracene, 7,12-dimethyl-	57976
Benzenamine	62533
Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-	492808
Benzenamine, 4-chloro-	106478
Benzenamine, 4-chloro-2-methyl-hydrochloride	3165933
Benzenamine, N,N-dimethyl-4-phenylazo	60117
Benzenamine, 4,4'-methyl-enebis(2-chloro-)	101144
Benzenamine, 2-methyl-, hydrochloride	636215
Benzenamine, 2-methyl-5-nitro-	99558
Benzenamine, 4-nitro-	100016
Benzene	71432
Benzene, 1-bromo-4-phenoxy-	101553

Benzene chloro-	108907
Benzene, chloromethyl-	100447
Benzene, 1,2-dichloro-	95501
Benzene, 1,3-dichloro-	541731
Benzene, 1,4-dichloro-	106467
Benzene, dichloromethyl-	98873
Benzene, 2,4-diisocyanatomethyl	584849
	91087
	26471625
Benzene, dimethyl	1330207
m-	108383
o-	95476
p-	106423
Benzene, hexachloro-	118741
Benzene, hexahydro-	110827
Benzene, hydroxy-	108952
Benzene, methyl-	108883
Benzene, 1-methyl-2,4-dinitro-	121142
Benzene, 1-methyl-2,6-dinitro-	606202
Benzene, 1,2-methylenedioxy-4-allyl-	94597
Benzene, 1,2-methylenedioxy-4-propenyl-	120581
Benzene, 1,2-methylenedioxy-4-propyl-	94586
Benzene, 1-methylethyl-	98828
Benzene, nitro-	98953
Benzene, pentachloro-	608935
Benzene, pentachloronitro-	82688
Benzene, 1,2,4,5-tetrachloro-	95943
Benzene, trichloromethyl	98077
Benzene, 1,3,5-trinitro-	99354
Benzeneacetic acid, 4-chloro-alpha (4-chloro phenyl)-alpha-hydroxy-, ethyl ester	510156
1,2-Benzenedicarboxylic acid anhydride	85449
1,2-Benzenedicarboxylic acid, [bis(2-ethylexyl)] ester	117817
1,2-Benzenedicarboxylic acid, dibutyl ester	84742
1,2-Benzenedicarboxylic acid, diethyl ester	84662
1,2 Benzenedicarboxylic acid, dimethyl ester	131113
1,2-Benzenedicarboxylic acid, di-n-octyl ester	117840
1,3-Benzenediol	108463
1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]	51434
Benzenesulfonic acid chloride	98099
Benzenesulfonyl chloride	98099
Benzenethiol	108985

Benzidine	92875
Benzo(a)anthracene	56553
Benzo(b)fluoranthene	205992
Benzo(k)fluoranthene	207089
Benzo(j,k)fluorene	206440
1,3-Benzodioxol-4-ol,2,2-dimethyl-, (Bendiocarb phenol)	22961826
1,3-Benzodioxol-4-ol,2,2-dimethyl-, methyl carbamate (Bendiocarb)	22781233
7-Benzofuranol,2,3-dihydro-2,2-dimethyl-(Carbonfuran phenol)	1563388
Benzoic acid	65850
Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b] indol-5-yl methly-carbamate ester (1:1) (Physostigmine salicylate)	57647
Benzonitrile	100470
Benzo(ghi)perylene	191242
Benzo(a)pyrene	50328
3,4-Benzopyrene	50328
p-Benzoquinone	106514
Benzotrichloride	98077
Benzoyl chloride	98884
1,2-Benzphenanthrene	218019
Benzyl chloride	100447
Beryllium**	7440417
BERYLLIUM & COMPOUNDS	
Beryllium chloride	7787475
Beryllium dust	7440417
Beryllium fluoride	7787497
Beryllium nitrate	13597994
	7787555
alpha - BHC	319846
beta - BHC	319857
gamma - BHC	58899
delta - BHC	319868
2,2'-Bioxirane	1464535
Biphenyl	92524
(1,1'-Biphenyl)-4,4' diamine	92875
(1,1'-Biphenyl)-4,4' diamine, 3,3' dichloro-	91941
(1,1'-Bipheynl)-4,4' diamine, 3,3'- dimethoxy-	119904
(1,1'-Biphenyl)-4,4'- diamine, 3,3'-dimethyl-	119937
Bis(2-chloroethoxy) methane	111911
Bis(2-cloroethyl) ether	111444
Bis(2-chloroisopropyl) ether	108601

Bis(chloromethyl) ether	542881
Bis(dimethylthiocarbamoyl) disulfide	137268
Bis(2-ethylhexyl) phthalate	117817
Bromine cyanide	506683
Bromoacetone	598312
Bromoform	75252
4-Bromophenyl phenyl ether	101553
Brucine	357573
1,3-Butadiene	106990
1,3-Butadiene, 1,1,2,3,4-hexachloro-1	87683
Butanamine, N-butyl-N-nitroso	924163
Butanoic acid, 4-[bis(2-chloroethyl)amino] benzene	305033
1-Butanol	71363
2-Butanone	78933
2-Butanone peroxide	1338234
2-Butenal	123739
	4170303
2-Butene, 1,4-dichloro-	764410
Butyl acetate	123864
iso-	110190
sec-	105464
tert-	540885
n-Butyl alcohol	71363
Butylamine	109739
iso-	78819
sec-	513495
sec-	13952846
tert-	75649
Butyl benzyl phthalate	85687
n-Butyl phthalate	84742
Butyric acid	107926
iso-	79312
Cacodylic acid	75605
Cadmium**	7440439
Cadmium acetate	543908
CADMIUM & COMPOUNDS	
Cadmium bromide	7789426
Cadmium chloride	10108642
Calcium arsenate	7778441
Calcium arsenite	52740166
Calcium carbide	75207

Calcium chromate	13765190
Calcium cyanamide	156627
Calcium cyanide	592018
Calcium dodecylbenzene sulfonate	26264062
Calcium hypochlorite	7778543
Camphene, octachloro-	8001352
Captan	133062
Carbamic acid, ethyl ester	51796
Carbamic acid, methylnitroso, ethyl ester	615532
Carbamic acid, [1-[(butylamino) carbonyl] -1H-benzimidazol-2-yl, methyl ester (Benomyl)	17804352
Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester (Barban)	101279
Carbamic acid, [(dibutylamino)thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester (Carbosulfan)	55285148
Carbamic acid, dimethyl-,1-[dimethylamino)carbonyl] -5-methyl-1H-pyrazol-3-yl ester (Dimetilan)	644644
Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)- 1H-pyrazol-5-yl ester (Isolan)	119380
Carbamic acid, 1H-benzimidazol-2-yl, methyl ester (Carbendazim)	10605217
Carbamic acid, methyl-,3-methylethyl ester (Metolcarb)	1129415
Carbamic acid, phenyl-, 1-methylphenyl ester (Propham)	122429
Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, di-methyl ester (Thiophanate-methyl)	23564058
Carbamide, N-ethyl-N-nitroso-	759739
Carbamide, N-methyl-N-nitroso-	684935
Carbamide, thio-	62566
Carbamimidoselenoic acid	630104
Carbamoyl chloride, dimethyl-	79447
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester (Triallate)	2303175
Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester (Prosulfocarb)	52888809
Carbaryl	63252
Carbofuran	1563662
Carbon bisulfide	75150
Carbon disulfide	75150
Carbonic acid, dithalium (I) salt	6533739
Carbonochloridic acid, methyl ester	79221
Carbon oxyfluoride	353504
Carbon tetrachloride	56235
Carbonyl chloride	75445
Carbonyl fluoride	353504
Carbonyl sulfide	463581

Catechol	120809
Chloral	75876
Chloramben	133904
Chlorambucil	305033
CHLORDANE (TECHNICAL MIXTURE AND METABOLITES)	
Chlordane	57749
Chlordane, technical	57749
CHLORINATED BENZENES	
CHLORINATED ETHANES	
CHLORINATED NAPHTHALENE	
CHLORINATED PHENOLS	
Chlorine	7782505
Chlorine cyanide	506774
Chlornaphazine	494031
Chloroacetaldehyde	107200
Chloroacetic acid	79118
CHLOROALKYL ETHERS	
p-Chloroaniline	106478
Chlorobenzene	108907
4-Chloro-m-cresol	59507
p-Chloro-m-cresol	59507
Chlorodibromomethane	124481
1-Chloro-2,3-epoxypropane	106898
Chloroethane	75003
2-Chloroethyl vinyl ether	110758
Chloroform	67663
Chloromethyl methyl ether	107302
beta-Chloronaphthalene	91587
2-Chloronaphthalene	91587
2-Chlorophenol	95578
o-Chlorophenol	95578
4-Chlorophenyl phenyl ether	70057232
1-(o-Chlorophenyl) thiourea	5344821
Chloroprene	126998
3-Chloropropionitrile	542767
Chlorosulfonic acid	7790945
4-Chloro-o-toluidine, hydrochloride	3165933
Chlorpyrifos	2921882
Chromic acetate	1066304
Chromic acid	11115745
	7738945

Chromic acid, calcium salt	13765190
Chromic sulfate	10101538
Chromium**	7440473
CHROMIUM AND COMPOUNDS	
Chromous chloride	10049055
Chrysene	218019
Cobaltous bromide	7789437
Cobaltous formate	544183
Cobaltous sulfamate	14017415
Coke Oven Emissions	N.A.
Copper**	7440508
COPPER AND COMPOUNDS	
Copper Cyanide	544923
Coumaphos	56724
Creosote	8001589
Cresol(s)	1319773
m-	108394
o-	95487
p-	106445
Cresylic acid	1319773
m-	108394
o-	95487
p-	106445
Crotonaldehyde	123739
	4170303
Cumene	98828
Cupric acetate	142712
Cupric acetoarsenite	12002038
Cupric chloride	7447394
Cupric nitrate	3251238
Cupric oxalate	5893663
Cupric sulfate	7758987
Cupric sulfate ammoniated	10380297
Cupric tartrate	815827
CYANIDES	
Cyanides (soluble cyanide salts), not elsewhere specified	57125
Cyanogen	460195
Cyanogen bromide	506683
Cyanogen chloride	506774
1,4-Cyclohexadienedione	106514
Cyclohexane	110827

Cyclohexanone	108941
1,3-Cyclopentadiene,1,2,3,4,5,5-hexachloro-	77474
Cyclophosphamide	50180
2,4-D Esters	94111
	94791
	94804
	1320189
	1928387
	1928616
	1929733
	2971382
	25168267
	53467111
Daunomycin	20830813
DDD	72548
4,4'DDD	72548
DDE	72559
	3547044
4,4'DDE	72559
DDT	50293
4,4'DDT	50293
DDT AND METABOLITES	
Decachloroctahydro-1,3,4-metheno-2H- cyclobuta[c,d]-pentalen-2-one	143500
Diallate	2303164
Diamine	302012
Diaminotoluene	95807
	25376458
	496720
	823405
Diazinon	333415
Diazomethane	334883
Dibenz[a,h]anthracene	53703
1,2:5,6-Dibenzanthracene	53703
Dibenzo[a,h]anthracene	53703
Dibenzofuran	132649
1,2:7,8-Dibenzopyrene	189559
Dibenz[a,i]pyrene	189559
1,2-Dibromo-3-chloropropane	96128
Dibutyl phthalate	84742
Di-n-butyl phthalate	84742
Dicamba	1918009

Dichlobenil	1194656
Dichlone	117806
S-(2,3-Dichloroallyl) diisopropyl-thiocarbamate	2303164
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide	23950585
Dichlorobenzene (mixed)	25321226
1,2-Dichlorobenzene	95501
1,3-Dichlorobenzene	541731
1,4-Dichlorobenzene	106467
m-Dichlorobenzene	541731
o-Dichlorobenzene	95501
p-Dichlorobenzene	106467
DICHLOROBENZIDINE	
3,3'-Dichlorobenzidine	91941
Dichlorobromomethane	75274
1,4-Dichloro-2-butene	764410
Dichlorodifluoromethane	75718
Dichlorodiphenyl dichloroethane	72548
Dichlorodiphenyl trichloroethane	50293
1,1-Dichloroethane	75343
1,2-Dichloroethane	107062
1,1-Dichloroethylene	75354
1,2-trans-Dichloroethylene	156605
Dichloroethyl ether	111444
2,4-Dichlorophenol	120832
2,6-Dichlorophenol	87650
Dichlorophenylarsine	696286
Dichloropropane	26638197
1,1-Dichloropropane	78999
1,3-Dichloropropane	142289
1,2-Dichloropropane	78875
Dichloropropane -Dichloropropene (mixture)	8003198
Dichloropropene	26952238
2,3-Dichloropropene	78886
1,3-Dichloropropene	542756
2,2-Dichloropropionic acid	75990
Dichlorvos	62737
Dieldrin	60571
1,2:3,4-Diepoxybutane	1464535
Diethanolamine	111422
Diethylamine	109897
N,N-Diethylaniline	91667

Diethylarsine	692422
1,4-Diethylene dioxide	123911
N,N-Diethylhydrazine	1615801
O,O-Diethyl S-[2-(ethylthio) ethyl]phosphrodithioate	298044
O,O Diethyl S-methyl dithiophosphate	3288582
Diethyl-p-nitrophenyl phosphate	311455
Ddiethyl phthalate	84662
O,O-Diethyl O-pyrazinyl phosphorothioate	297972
Diethylstilbestrol	56531
1,2-Dihydro-3,6-pyridazinedione	123331
Dihydrosafrole	94586
Diisopropyl fluorophosphate	55914
Dimethoate	60515
3,3-Dimethoxybenzidine	119904
Dimethylamine	124403
Dimethylaminoazobenzene	60117
N,N-Dimethylaniline	121697
7,12-Dimethylbenz(a) anthracene	57976
3,3-Dimethylbenzidine	119937
alpha, alpha-Dimethylbenzylhydro peroxide	80159
3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime	39196184
Dimethylcarbamoyl chloride	79447
Dimethylformamide	68122
1,1-Dimethylhydrazine	57147
1,2-Dimethylhydrazine	540738
O,O-Dimethyl O-p-nitrophenyl phosphorothioate	298000
Dimethylnitrosamine	62759
alpha,alpha-Dimethyl phenethylamine	122098
2,4-Dimethylphenol	105679
Dimethyl phthalate	131113
Dimethyl sulfate	77781
Dinitrobenzene (mixed)	25154545
m-	99650
o-	528290
p-	100254
4,6-Dinitro-o-cresol and salts 5	534521
4,6-Dinitro-o-cyclohexylphenol	131895
Dinitrophenol	25550587
2,5-	329715
2,6-	573568
2,4-Dinitrophenol	51285

Dinitrotoluene	25321146
3,4-Dinitrotoluene	610399
2,4-Dinitrotoluene	121142
Dinoseb	88857
Di-n-octyl phthalate	117840
1,4-Dioxane	123911
DIPHENYLHRDRAZINE	
1,2-Diphenylhydrazine	122667
Diphosphoramide, octamethyl-	152169
Dipropylamine	142847
Di-n-propylnitrosamine	621647
Diquat	85007
	2764729
Disulfoton	298044
2,4-Dithiobiuret	541537
Dithiopyrophosphoric acid, tetraethyl ester	3689245
1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)carbonyl] oxime (Tirpate)	26419738
Diuron	330541
Dodecylbenzenesulfonic acid	27176870
Endosulfan	115297
alpha-Endosulfan	959988
beta-Endosulfan	33213659
ENDOLSUFAN AND METABOLITES	
Ensodulfan sulfate	1031078
Endothall	145733
Endrin	72208
Endrin aldehyde	7421934
ENDRIN AND METABOLITES	
Epichlorohydrin	106898
Epinephrine	51434
1,2-Epoxybutane	106887
Ethanal	75070
Ethanamine, 1,1-dimethyl-2-phenyl-	122098
Ethanamine, N-ethyl-N-nitroso-	55185
Ethane, 1,2-dibromo-	106934
Ethane, 1,1-dichloro-	75343
Ethane, 1,2-dichloro-	107062
Ethane, 1,1,1,2,2,2-hexachloro-	67721
Ethane, 1,1'-[methylenebis(oxy)] bis(2-chloro-	111911
Ethane, 1,1'-oxybis-	60297
Ethane, 1,1'-oxybis(2-chloro-	111444

Ethane, pentachloro-	76017
Ethane, 1,1,1,2-tetrachloro-	630206
Ethane, 1,1,2,2-tetrachloro-	79345
Ethane, 1,1,2-trichloro-	79005
Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-	72435
1,2- Ethanediylbiscarbamodi thioic acid	111546
Ethanenitrile	75058
Ethanethioamide	62555
Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo, methyl ester (A2213)	30558431
Ethanimidothioic acid, 2-(dimethylamino)-N-[[methlyamino)carbonyl]oxy]-2-oxo, methyl ester (Oxamyl)	23135220
Ethanimidothioic acid, N,N'-[thiobis[(methylimino) carbonyloxy]] bis-, di-methyl ester (Thiodicarb)	59669260
Ethanol, 2,2'-(nitrosoimino)bis-	1116547
Ethanol, 2,2'-oxybis-, dicarbamate (Diethylene glycol, di carbamate)	5952261
Ethanone, 1-phenyl-	98862
Ethanoyl chloride	75365
Ethenamine, N-methyl-N-nitroso	4549400
Ethene, chloro-	75014
Ethene, 2-chloroethoxy	110758
Ethene, 1,1-dichloro-	75354
Ethene, 1,1,2,2-tetrachloro-	127184
Ethene, trans-1,2-dichloro-	156605
Ethion	563122
Ethyl acetate	141786
Ethyl acrylate	140885
Ethylbenzene	100414
Ethyl carbamate (Urethan)	51796
Ethyl cyanide	107120
Ethyl 4,4'-dichlorobenzilate	510156
Ethylene dibromide	106934
Ethylene dichloride	107062
Ethylene glycol	107211
Ethylene oxide	75218
Ethylenebis(dithio carbamic acid)	111546
Ethylendiamine	107153
Ethylenediamine tetraacetic acid (EDTA)	60004
Ethylenethiourea	96457
Ethylenimine	151564
Ethyl ether	60297

Ethylidene dichloride	75343
Ethyl methacrylate	97632
Ethyl methanesulfonate	62500
Famphur	52857
Ferric ammonium citrate	1185575
Ferric ammonium oxalate	2944674
	55488874
Ferric chloride	7705080
Ferric fluoride	7783508
Ferric nitrate	10421484
Ferric sulfate	10028225
Ferrous ammonium sulfate	10045893
Ferrous chloride	7758943
Ferrous sulfate	7720787
	7782630
Fluoroacetic acid, sodium salt	62748
Fluoroanthene	206440
Fluorene	86737
Fluorine	7782414
Fluoroacetamide	640197
Formaldehyde	50000
Formic acid	64186
Fulminic acid, mercury(II) salt	628864
Fumaric acid	110178
Furan	110009
Furan, tetrahydro	109999
2-Furancarboxaldehyde	98011
2,5-Furandione	108316
Furfural	98011
Furfuran 1	110009
D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	18883664
Glycidylaldehyde	765344
Guanidine, N-nitroso-N-methyl-N'-nitro	70257
Guthion	86500
HALOETHERS	
HALOMETHANES	
Heptachlor	76448
HEPTACHLOR & METABOLITES	
Heptachlor epoxide	1024573
Hexachlorobenzene	118741
Hexachlorobutadiene	87683

HEXACHLOROCYCLOHEXANE (all isomers)	608731
Hexachlorocyclohexane (gamma isomer)	58899
Hexachlorocyclopentadiene	77474
1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a- octahydro-endo,endo-1,4:5,8-dimethanon aphthalene	72208
1,2,3,4,10,10-Hexachloro-6,7-epoxy- 1,4,4a,5,6,7,8,8a-octahydro-endo, exo-1,4:5,8-dimethanonaphthalene	60571
Hexachloroethane	67721
Hexachlorohexahydro-endo,endo-dimethanonaphthalene	465736
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,endo, endo-dimethanonaphthalene	465736
1,2,3,4,10-10-Hexachloro-1,4,4a,5,8,8a, -hexahydro-1,4:5,8-endo,exo,dimethanonaphthalene	309022
Hexachlorophene	70304
Hexachloropropene	1888717
Hexaethyl tetraphosphate	757584
Hexamethylene-1,6-diisocyanate	822060
Hexamethylphosphoramide	680319
Hexane	110543
Hydrazine	302012
Hydrazine, 1,2-diethyl-	1615801
Hydrazine, 1,1-dimethyl-	57147
Hydrazine, 1,2-dimethyl-	540738
Hydrazine, 1,2-diphenyl-	122667
Hydrazine, methyl-	60344
Hydrazinecarbothioamide	79196
Hydrochloric acid	7647010
Hydrocyanic acid	74908
Hydrofluoric acid	7664393
Hydrogen cyanide	74908
Hydrogen fluoride	7664393
Hydrogen phosphide	7803512
Hydrogen sulfide	7783064
Hydroperoxide, 1-methyl-1-phenylethyl	80159
Hydroquinone	123319
Hydrosulfuric acid	7783064
Hydroxydimethylarsine oxide	75605
2-Imidazolidinethione	96457
Indeno(1,2,3-cd)pyrene	193395
Isobutyl alcohol	78831
Isocyanic acid, methyl ester	624839
Isophorone	78591

Isoprene	78795
Isopropanolamine dode-cylbenzenesulfonate	42504461
Isosafrole	120581
3(2H)-Isoxazolone, 5-(aminomethyl)-	2763964
Kelthane	115322
Kepone	143500
Lasiocarpine	303344
Lead**	7439921
Lead acetate	301042
LEAD AND COMPOUNDS	
Lead arsenate	7784409
	7645252
	10102484
Lead chloride	7758954
Lead fluoborate	13814965
Lead fluoride	7783462
Lead iodide	10101630
Lead nitrate	10099748
Lead phosphate	7446277
Lead stearate	7428480
	1072351
	56189094
	52652592
Lead subacetate	1335326
Lead sulfate	15739807
	7446142
Lead sulfide	1314870
Lead thiocyanate	592870
Lindane	58899
Lithium chromate	14307358
Malathion	121755
Maleic acid	110167
Maleic anhydride	108316
Maleic hydrazide	123331
Malononitrile	109773
Manganese, bis(dimethylcarbamodithioato-S,S')-(manganese dimethyldithio-carbamate)	15339363
MDI	101688
Melphalan	148823
Mercaptodimethur	2032657
Mercuric cyanide	592041
Mercuric nitrate	10045940

Mercuric sulfate	7783359
Mercuric thiocyanate	592858
Mercurous nitrate	10415755
	7782867
Mercury	7439976
MERCURY AND COMPOUNDS	
Mercury, (acetato-O)phenyl-	62384
Mercury fulminate	628864
Methacrylonitrile	126987
Methanamine, N-Methyl-	124403
Methane, bromo-	74839
Methane, chloro-	74873
Methane, chloromethoxy-	107302
Methane, dibromo-	74953
Methane, dichloro-	75092
Methane, dichloro-difluoro-	75718
Methane, iodo-	74884
Methane, oxybis(chloro-	542881
Methane, tetrachloro-	56235
Methane, tetranitro-	509148
Methane, tribromo-	75252
Methane, trichloro-	67663
Methane, trichloro-fluoro-	75694
Methanesulfonic acid, ethyl ester	62500
Methanethiol	74931
Methanesulfenyl chloride, trichloro-	594423
Methanimidamide, N,N-dimethyl-N'- [2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl] -(Formparanate)	17702577
Methanimidamide, N,N-dimethyl-N'- [3-[[(methylamino)carbonyl]oxy]penyl]-, monohydrochloride (Formetanate hydro-chloride)	23422539
4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a, 3,7,7a-tetrahydro-	76448
Methanoic acid	64186
4,7-Methanoindan,1,2,4,5,6,7,8,8-octa-chloro- 3a,4,7,7a-tetrahydro-	57749
Methanol	67561
Methapyrilene	91805
Methomyl	16752775
Methoxychlor	72435
Methyl alcohol	67561
2-Methylaziridine	75558
Methyl bromide	74839

1-Methylbutadiene	504609
Methyl chloride	74873
Methyl chlorocarbonate	79221
Methyl chloroform	71556
4,4-Methylenebis (2-chloroaniline)	101144
2,2'-Methylenebis (3,4,6-trichlorophenol)	70304
3-Methylcholanthrene	56495
Methylene bromide	74953
Methylene chloride	75092
4,4'-Methylenedianiline	101779
Methylene oxide	50000
Methyl ethyl ketone	78933
Methyl ethyl ketone peroxide	1338234
Methyl hydrazine	60344
Methyl iodide	74884
Methyl isobutyl ketone	108101
Methyl isocyanate	624839
2-Methyllactonitrile	75865
Methyl mercaptan	74931
Methyl methacrylate	80626
N-Methyl-N'-nitro-N-nitrosoguanidine	70257
Methyl parathion	298000
4-Methyl-2-pentanone	108101
Methyl tert-butyl ether	1634044
Methylthiouracil	56042
Mevinphos	7786347
Mexacarbate	315184
Mitomycin C	50077
Monoethylamine	75047
Monomethylamine	74895
Naled	300765
5,12-Naphthacenedione, (8S-cis)-8-acetyl-10- [3-amino-2,3,6-tride-oxy-alpha-l-lyxo-hexo-pyranosyl) oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	20830813
Naphthalene, 2-chloro-	91203
Naphthalene, 2-chloro-	91587
1,4-Naphthalenedione	130154
2,7-Naphthalenedisul-fonic acid, 3,3' -[(3,3'-dimethyl-(1,1'biphenyl)-4,4-diyl)-bis(azo) bis(5-amino-4-hydroxy)-tetra-sodium salt	72571
Naphthenic acid	1338245
1,4-Naphthoquinone	130154
1-Naphthylamine	134327

2-Naphthylamine	91598
alpha-Naphthylamine	134327
beta-Naphthylamine	91598
2-Naphthylamine, N,N-bis(2-chloroethyl)-alpha-	494031
Naphthylthathiourea	86884
Nickel**	7440020
NICKEL AND COMPOUNDS	
Nickel ammonium sulfate	15699180
Nickel carbonyl	13463393
Nickel chloride	7718549
	37211055
Nickel cyanide	557197
Nickel (II) cyanide	557197
Nickel hydroxide	12054487
Nickel nitrate	14216752
Nickel sulfate	7786814
Nickel tetracarbonyl	13463393
Nicotine and salts	54115
Nitric acid	7697372
Nitric oxide	10102439
p-Nitroaniline	100016
Nitrobenzene	98953
4-Nitrobiphenyl	92933
Nitrogen dioxide	10102440
	10544726
Nitrogen (II) oxide	10102439
Nitrogen (IV) oxide	10102440
	10544726
Nitroglycerine	55630
Nitrophenol (mixed)	25154556
m-	554847
o-	88755
p-	100027
p-Nitrophenol	100027
2-Nitrophenol	88755
4-Nitrophenol	100027
NITROPHENOLS	
2-Nitropropane	79469
NITROSAMINES	
N-Nitrosodi-n-butylamine	924163
N-Nitrosodiethanolamine	1116547

N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
N-Nitrosodiphenylamine	86306
N-Nitrosodi-n-propylamine	621647
N-Nitroso-N-ethylurea	759739
N-Nitroso-N-methylurea	684935
N-Nitroso-N-methylurethane	615532
N-Nitrosomethyl-vinylamine	4549400
N-Nitrosomorpholine	59892
N-Nitrosopiperidine	100754
N-Nitrosopyrrolidine	930552
Nitrotoluene	1321126
m-	99081
o-	88722
p-	99990
5-Nitro-o-toluidine	99558
5-Norbornene-2,3-dimethanol,1,4,5,6,7,7-hexachloro, cyclic sulfite	115297
Octamethylpyrophosphor amide	152169
Osmium oxide	20816120
Osmium tetroxide	20816120
7-Oxabicyclo[2.2.1] Heptane-2,3-dicarboxylic acid	145733
1,2-Oxathiolane,2,2-dioxide	1120714
2h-1,3,2-Oxazaphosphorine, 2-[bis(2-chloroethyl)amino] tetrahydro-2-oxide.	50180
Oxirane	75218
Oxirane, 2-(chloro-methyl)	106898
Paraformaldehyde	30525894
Paraldehyde	123637
Parathion	56382
Pentachlorobenzene	608935
Pentachloroethane	76017
Pentachloronitrobenzene	82688
Pentachlorophenol	87865
1,3-Pentadiene	504609
Phenacetin	62442
Phenanthrene	85018
Phenol	108952
Phenol, 2-chloro-	95578
Phenol, 4-chloro-3-methyl-	59507
Phenol, 2-cyclohexyl-4,6-dinitro-	131895
Phenol, 2,4-dichloro-	120832
Phenol, 2,6-dichloro-	87650

Phenol, 2,4-dimethyl-	105679
Phenol, 2,4-dinitro-	51285
Phenol, 2,4-dinitro-6-(1-methylpropyl)	88857
Phenol, 2,4-dinitro-6-methyl-, and salts	534521
Phenol, 2-(1-methylethoxy)-, methyl carbamate	114261
Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate)	64006
Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate (Promecarb)	2631370
Phenol, 4-nitro-	100027
Phenol, pentachloro-	87865
Phenol, 2,3,4,6-tetrachloro-	58902
Phenol, 2,4,5-trichloro-	95954
Phenol, 2,4,6-trichloro-	88062
Phenol, 2,4,6-trinitro-, ammonium salt	131748
Phenyl dichloroarsine	696286
1, 10-(1,2-Phenylene)pyrene	193395
Phenylenediamine (para-isomer)	106503
Phenylmercuric acetate	62384
N-Phenylthiourea	103855
Phorate	298022
Phosgene	75445
Phosphine	7803512
Phosphoric acid	7664382
Phosphoric acid, diethyl p-nitrophenyl ester	311455
Phosphoric acid, lead salt	7446277
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288582
Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester	298022
Phosphorodithioic acid, O,O-dimethyl S-[2(methylamino) -2-oxoethyl] ester	60515
Phosphorofluoridic acid, bis(1-methylethyl) ester	55914
Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester	56382
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297972
phosphorothioic acid, O,O-dimethyl O-p-[dimethylamino)-sulfonyl] phenyl] ester.	52857
Phosphorus	7723140
Phosphorus oxychloride	10025873
Phosphorus pentasulfide	1314803
Phosphorus sulfide	1314803
Phosphorus trichloride	7719122
PHTHALATE ESTERS	
Phthalic anhydride	85449

2-Picoline	109068
Plumbane, tetraethyl-	78002
POLYCHLORINATED BIPHENYLS (PCBs)	1336363
	12674112
	11104282
	11141165
	12672296
	53469219
	11097691
	11096825
POLYNUCLEAR AROMATIC HYDROCARBONS	
Potassium arsenate	7784410
Potassium arsenite	10124502
Potassium bichromate	7778509
Potassium chromate	77890006
Potassium cyanide	151508
Potassium hydroxide	1310583
Potassium permanganate	7722647
Potassium silver cyanide	506616
Pronamide	23950585
1-Propanal, 2,3-epoxy-	765344
Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl] oxime	116063
Propanal, 2-methyl-2-(methylsulfonyl)-, O-[(methylamino)carbonyl] oxime (Aldicarb sulfone)	1646884
1-Propanamine	107108
1-Propanamine, N-propyl-	142847
Propane, 1,2-dibromo-3-chloro-	96128
Propane, 2-nitro-	79469
Propane, 2,2-oxybis(2-chloro-	108601
1,3-Propane sultone	1120714
Propanedinitrile	109773
Propanenitrile	107120
Propanenitrile, 3-chloro-	542767
Propanenitrile, 2-hydroxy-2-methyl-	75865
1,2,3-Propanetriol,trinitrate-	55630
Propanol, 2,3-dibromo-,phosphate (3:1)	126727
1-Propanol, 2-methyl-	78831
2-Propanone	67641
2-Propanone, 1-bromo	598312
Propargite	2312358
Propargyl alcohol	107197

2-Propenal	107028
2-Propenamide	79061
Propene, 1,3-dichloro-	542756
1-Propene, 1,1,2,3,3,3-hexachloro-	1888717
2-Propenenitrile	107131
2-Propenenitrile, 2-methyl-	126987
2-Propenoic acid	79107
2-Propenoic acid, ethyl ester	140885
2-Propenoic acid, 2-methyl-, ethyl ester	97632
2-Propenoic acid, 2-methyl-, methyl ester	80626
2-Propen-1-o1	107186
beta-Propiolactone	57578
Propionaldehyde	123386
Propionic acid	79094
Propionic acid, 2-(2,4,5-trichlorophenoxy)-	93721
Propionic anhydride	123626
Propoxur (Baygon)	114261
n-Propylamine	107108
Propylene dichloride	78875
Propylene oxide	75569
1,2-Propylenimine	75558
2-Propyn-1-o1	107197
Pyrene	129000
Pyrethrins	121299
	121211
	8003347
4-Pyridinamine	504245
Pyridine	110861
Pyridine,2-[(2-(di-methylyamine)ethyl)-2-thenylamino]-	91805
Pyridine, hexahydro-N-nitroso-	100754
Pyridine,2-methyl-	109068
Pyridine,(S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	54115
4(1H)-Pyrimidinone,2,3-dihydro-6-methyl-2-thioxo-	56042
Pyrophosphoric acid, tetraethyl ester	107493
Pyrrole, tetrahydro-n-nitroso-	930552
Pyrrolo[2,3-b]indol-5-ol,1,2,3,3a,8,8a-hexahydro-1, 3a,8-trimethyl-, methylcarbamate (ester),(3aS-cis)- (physostigmine)	57476
Quinoline	91225
RADIONUCLIDES	
Reserpine	50555
Resorcinol	108463
Safrole	94597

Selenious acid	7783008
Selenium**	7782492
SELENIUM AND COMPOUNDS	
Selenium dioxide	7446084
Selenium disulfide	7488564
Selenium oxide	7446084
Selenourea	630104
L-Serine, diazoacetate (ester)	115026
Silver**	7440224
SILVER AND COMPOUNDS	
Silver cyanide	506649
Silver nitrate	7761888
Silvex	93721
Sodium	7440235
Sodium arsenate	7631892
Sodium arsenite	7784465
Sodium azide	26628228
Sodium bichromate	10588019
Sodium bifluoride	1333831
Sodium bisulfite	7631905
Sodium chromate	7775113
Sodium cyanide	143339
Sodium dodecylbenzene sulfonate	25155300
Sodium fluoride	7681494
Sodium hydrosulfide	16721805
Sodium hydroxide	1310732
Sodium hypochlorite	7681529
	10022705
Sodium methylate	124414
Sodium nitrite	7632000
Sodium phosphate, dibasic	7558794
	10039324
	10140655
Sodium phosphate, tribasic	7601549
	7785844
	10101890
	10361894
	7758294
	10124568
Sodium selenite	10102188
	7782823

4,4'Stilbenediol, alpha,alpha'-diethyl-	56531
Streptozotocin	18883664
Strontrium chromate	7789062
Strychnidin-10-one, and salts	57249
Strychnidin-10-one, 2,3-dimethoxy-	357573
Strychnine and salts	57249
Styrene	100425
Sulfur hydride	7783064
Sulfur monochloride	12771083
Sulfur phosphide	1314803
Sulfur selenide	7488564
Sulfuric acid	7664939
	8014957
Sulfuric acid, dimethyl ester	77781
Sulfuric acid, thallium(I) salt	7446186
	10031591
2,4,5-T	93765
2,4,5-T acid	93765
2,4,5-T amines	2008460
	6369966
	6369977
	1319728
	3813147
2,4,5-T esters	93798
	2545597
	61792072
	1928478
	25168154
2,4,5-T salts	13560991
TDE	72548
1,2,4,5-Tetrachlorobenzene	95943
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746016
1,1,1,2-Tetrachloroethane	630206
1,1,2,2-Tetrachloroethane	79345
Tetrachloroethylene	127184
2,3,4,6-Tetrachlorophenol	58902
Tetraethyldithiopyro-phosphate	3689245
Tetraethyl lead	78002
Tetraethyl pyrophosphate	107493
Tetrahydrofuran	109999
Tetranitromethane	509148

Tetraphosphoric acid, hexaethyl ester	757584
Thallic oxide	1314325
Thallium**	7440280
THALLIUM AND COMPOUNDS	
Thallium(I) acetate	563688
Thallium(I) carbonate	6533739
Thallium(I) chloride	7791120
Thallium(I) nitrate	10102451
Thallium(III) oxide	1314325
Thallium(I) selenide	12039520
Thallium(I) sulfate	7446186
	10031591
Thioacetamide	62555
Thiofanox	39196184
Thiomidodicarbonic diamide	541537
Thiomethanol	74931
Thiophenol	108985
Thiosemicarbazide	79196
Thiourea	62566
Thiourea, (2,chlorophenyl)-	5344821
Thiourea, 1-naphthalenyl	86884
Thiourea, phenyl	103855
Thiram	137268
Toluene	108883
Toluenediamine	95807
	25376458
	823405
Toluene diisocyanate	584849
	91087
	26471625
o-Toluidine hydrochloride	636215
Toxaphene	8001352
2,4,5-TP acid	93721
2,4,5-TP acid esters	32534955
1H-1,2,4-Triazol-3-amine	61825
Trichlorfon	52686
1,2,4-Trichlorobenzene	120821
1,1,1-Trichloroethane	71556
1,1,2-Trichloroethane	79005
Trichloroethene	79016
Trichloroethylene	79016

Trichloromethanesulfenyl chloride	594423
Trichloromonofluoro-methane	75694
Trichlorophenol	25167822
2,3,4-Trichlorophenol	15950660
2,3,5-Trichlorophenol	933788
2,3,6-Trichlorophenol	933755
2,4,5-Trichlorophenol	95954
2,4,6-Trichlorophenol	88062
3,4,5-Trichlorophenol	609198
2,4,6-Trichlorophenol	88062
2,4,5-Trichlorophenoxy-acetic acid	93765
Triethanolamine dodecylbenzene-sulfonate	27323417
Triethylamine	121448
Trifluralin	1582098
Trimethylamine	75503
2,2,4-Trimethylpentane	540841
sym-Trinitrobenzene	99354
1,3,5-Trioxane, 2,4,6-trimethyl-	123637
Tris (2,3-dibromopropyl) phosphate	126727
Trypan blue	72571
Unlisted Hazardous Wastes	
Characteristic of Ingnitability	
Characteristic of Corrosivity	
Characteristic of Reactivity	
Characteristic of EP Toxicity	
Arsenic	
Barium	
Cadmium	
Chromium	
Lead	
Mercury	
Selenium	
Silver	
Endrin	
Lindane	
Methoxychlor	
Toxaphene	
2,4-D	
2,4,5-TP	
Uracil, 5-[bis(2-chloro-ethyl)amino]-	66751
Uracil mustard	66751

Uranyl acetate	541093
Uranyl nitrate	10102064
	36478769
Vanadic acid, ammonium salt	7803556
Vanadium (V) oxide	1314621
Vanadium pentoxide	1314621
Vanadyl sulfate	27774136
Vinyl acetate	108054
Vinyl bromide	593602
Vinyl chloride	75014
Vinylidene chloride	75354
Warfarin	81812
Xylene (mixed)	1330207
m-	108383
o-	95476
p-	106423
Xylenol	1300716
yohimban-16-carboxylic-acid, 11, 17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methylester.	50555
Zinc**	7440666
ZINC AND COMPOUNDS	
Zinc acetate	557346
Zinc ammonium chloride	52628258
	14639975
	14639986
zinc, bis(dimethylcarbamodi-thioato-S,S')-, (Ziram)	137304
Zinc borate	1332076
Zinc bromide	7699458
Zinc carbonate	3486359
Zinc chloride	7646857
Zinc cyanide	557211
Zinc fluoride	7783495
Zinc formate	557415
Zinc hydrosulfite	7779864
Zinc nitrate	7779886
Zinc phenolsulfonate	127822
Zinc phosphide	1314847
Zinc silicofluoride	16871719
Zinc sulfate	7733020
Zirconium nitrate	13746899
Zirconium potassium fluoride	16923958
Zirconium sulfate	14644612

Zirconium tetrachloride	10026116
2-Amino-1-methylbenzene*	95534
4-Amino-1-methylbenzene*	106490
2-Ethoxyethanol*	110805
Ethylene glycol monoethyl ether*	110805
o-Toluidine	95534
p-Toluidine	106490

~~** No reporting of releases of this hazardous substance is required if diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 Inches).~~
~~*** The reportable quantity of asbestos is limited to friable forms only.~~

~~(E) Hazardous substances shall include a mixture of hazardous substance and petroleum which is not contained in a petroleum UST system.~~

1301:7-9-04 **Registration of UST systems.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to sections 3737.02 and 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish registration requirements for underground storage tanks containing petroleum or other regulated substances. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Annual registration.

(1) ~~On or before August 1, 1991, and not~~ No later than the last day of June ~~first day of July~~ of each ~~subsequent~~ year, owners of the following UST systems shall submit an annual registration application to the state fire marshal:

(a) UST systems currently in use; and

(b) UST systems which were taken out of service after January 1, 1974, in a manner not in compliance with either the "Ohio Fire Code" or this chapter of the Administrative Code, as those requirements were in effect at the time the UST systems were taken out of service.

Owners shall submit an annual registration application to the state fire marshal for each location containing such UST systems.

(2) The state fire marshal shall prescribe the annual registration application form to be used and shall, at least thirty days prior to the registration deadline of each year, provide an annual registration application to each owner that submitted any UST registration application to the state fire marshal during the previous year.

(3) A fee in the amount of fifty dollars for each tank or compartment comprising an UST system listed on the application shall be submitted by the owner with the annual registration application to the state fire marshal. Any registration received after the last day of June each year shall be charged a ten percent late fee.

(C) Registration for new UST system installations.

(1) Any owner who installs an UST system shall, within thirty days of bringing such UST system into service, submit ~~the applicable~~ a new UST system ~~installation~~ registration application described in either paragraph (C)(2) or (C)(3) of this rule to the state fire marshal for each location where such UST system is installed.

(2) If an UST system is installed at a location for which there is no current registration, the owner of the UST system shall submit a new facility registration application to the state fire marshal on the application form prescribed by the state fire marshal.

(3) If an UST system is installed at a location for which there is a current registration, the owner of the UST system shall submit a modified registration application to the state fire marshal on the form prescribed by the state fire marshal.

(4) A fee in the amount of fifty dollars for each newly installed tank or compartment brought into

service which is listed on either **registration** application described in paragraph (C)(2) or (C)(3) of this rule shall be submitted by the owner with the new UST ~~system~~ **registration** application to the state fire marshal.

(D) Registration of previously deferred USTs.

Owners shall submit a new UST system registration application to the state fire marshal on the form prescribed by the state fire marshal for any previously deferred USTs identified in paragraph (C) of rule 1301:7-9-01 of the Administrative Code that are subject to the registration requirement. All requirements identified in this rule shall apply to previously deferred USTs.

(E)~~(D)~~ Transfer of UST ownership.

(1) Any person to whom ownership of any UST is transferred shall, within thirty days of the transfer, submit a transfer of UST registration application to the state fire marshal for each location where an UST subject to the transfer is located. The state fire marshal shall prescribe a form for this application. The transferor shall notify the transferee of this requirement at the time of transfer.

(2) A fee in the amount of fifty dollars for each tank **or compartment** comprising an UST system listed on the application shall be submitted by the new owner of the UST with the transfer of UST registration application to the state fire marshal.

(F) Change of product.

Owners shall submit a modified registration application to the state fire marshal on the form prescribed by the state fire marshal within thirty days of a change of product. A registration fee is not required.

(G)~~(E)~~ Fee exemptions.

The United States, the state of Ohio, and political subdivisions are exempted from paying the fees described in paragraphs (B)(3), (C)(4), and ~~(D)(2)~~**(E)(2)** of this rule. This paragraph does not exempt the United States, the state of Ohio, and political subdivisions from compliance with all other provisions of this rule.

(H)~~(F)~~ The state fire marshal shall review each application and reject the application if the application does not provide all of the information required by the prescribed form or if the application was not accompanied by the applicable fee payment.

(I)~~(G)~~ No person shall falsify any information on any application form required by this rule.

(J)~~(H)~~ Owners of UST systems shall retain a copy of all current and valid registration applications required by this rule, and shall make such copy available for inspection within twenty-four hours of a request by the state fire marshal or local fire official.

The existing text for this rule is being rescinded and replaced with the following:

1301:7-9-06 Design, construction, installation, operation and maintenance for UST systems.

(A) Purpose and scope.

(1) For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish design, construction, installation, operation and maintenance requirements for underground storage tanks containing petroleum or other regulated substances. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code".

(2) Where any provision in this rule creates a duty of compliance for an owner and operator, and the owner and operator are separate persons, compliance may be attained by either person. In the event of noncompliance, both are liable.

(B) Performance standards for new UST systems.

(1) New UST systems shall be provided with secondary containment for the UST and underground piping that routinely contains regulated substances to completely contain a release of a regulated substance and prevent a release of a regulated substance to the environment at any time during the operational life of the UST system pursuant to the following requirements:

(a) New USTs shall be double-wall and shall be equipped, operated and maintained pursuant to paragraphs (D)(1) and (D)(2) of this rule;

(b) Underground piping that routinely contains regulated substances that is part of a new UST system shall be double-wall and shall be equipped, operated and maintained pursuant to paragraphs (D)(3) and (D)(4) of this rule except that:

(i) Underground piping that conveys petroleum under suction is not required to be equipped to meet the secondary containment requirements of paragraph (B)(1)(b) of this rule; and

(ii) A manifold that conveys petroleum under suction between tanks is not required to be equipped to meet the secondary containment requirements of paragraph (B)(1)(b) of this rule;

(c) New UST systems shall be equipped with containments and operated and maintained pursuant to paragraphs (D)(5) and (D)(6) of this rule, and containments shall be present at the following locations:

(i) In those areas where piping that routinely contains regulated substances exits the UST;

(ii) In those areas where piping that routinely contains regulated substances transitions from underground to above ground;

(iii) In those areas where a transition sump is required to maintain the proper slope of piping that routinely contains regulated substances; and

(iv) In those areas under each motor fuel dispenser;

(d) Other methods of secondary containment, such as vaults, external liners and jackets, may be used if owners and operators:

(i) Demonstrate to the state fire marshal that the alternative method of secondary containment is at least as protective of human health and the environment as those methods described in paragraphs (B)(1)(a) to (B)(1)(c) of this rule; and

(ii) Obtain written approval from the state fire marshal to use the alternative method of secondary containment before installation and operation of the new UST system. The state fire marshal may approve, deny or rescind the method at the state fire marshal's discretion. If the alternative method of secondary containment is approved by the state fire marshal, the owner and operator shall comply with any conditions imposed by the state fire marshal on its use. The alternative method request shall be evaluated on a site by site basis;

(e) New UST systems shall be equipped with spill prevention equipment and overfill prevention equipment pursuant to paragraphs (D)(7) and (D)(8) of this rule, except that flow restrictors in vent lines may not be used to meet overfill prevention requirements on new UST systems;

(f) If an owner or operator elects to equip an UST system in a manner that exceeds the requirements of this rule, the owner and operator is only required to maintain the UST system to the extent required by this rule; and

(g) New UST systems shall meet compatibility requirements described in paragraph (D)(9) of this rule.

(C) Performance standards for existing UST systems.

(1) Existing underground storage tanks (i.e., just the tank portion of the system) shall be equipped, operated and maintained pursuant to paragraphs (D)(1) and (D)(2) of this rule except that:

(a) Existing USTs installed prior to May 16, 2011, are not required to be equipped to meet the new UST secondary containment requirements of paragraph (B)(1) of this rule unless the USTs undergo work pursuant to paragraph (C)(7)(a) of this rule; and

(b) The addition of internal lining in the field to an existing metal UST system to meet cathodic protection requirements is prohibited.

(c) The addition of internal lining in the field to UST systems for purposes other than for cathodic protection is allowed. Owners and operators shall comply with any conditions

imposed by the state fire marshal on the use of internal lining. Owners and operators shall obtain approval from the manufacturer of the UST prior to the addition of internal lining. All lining activity shall be performed by a person recognized by the manufacturer to perform the lining of the UST.

(2) Existing underground piping that routinely contains regulated substances shall be equipped, operated and maintained pursuant to the new piping requirements defined in paragraph (B)(1)(b) and paragraphs (D)(3) and (D)(4) of this rule except that:

(a) Existing underground piping associated with UST systems installed prior to March 1, 2005, is not required to be equipped to meet secondary containment requirements of paragraph (B)(1)(b) of this rule except those piping components undergoing work pursuant to paragraph (C)(7)(b) of this rule;

(b) Existing underground piping that conveys petroleum under suction is not required to be equipped to meet secondary containment requirements of paragraph (B)(1)(b) this rule;

(c) Existing suction manifolds between tanks are not required to be equipped to meet the secondary containment requirements of paragraph (B)(1)(b) of this rule; and

(d) Existing UST systems installed prior to March 1, 2005, are not required to be equipped with isolation valves between the piping and the tank as described in paragraph (D)(3)(b) of this rule.

(3) Existing UST systems shall be equipped, operated and maintained with containments as specified in paragraphs (D)(5) and (D)(6) of this rule except that existing UST systems installed prior to March 1, 2005, are not required to be equipped with containments except for those UST systems undergoing work pursuant to paragraphs (C)(7)(c) and (C)(7)(d) of this rule.

(4) Existing UST systems shall be equipped with spill prevention equipment and overfill prevention equipment meeting the requirements of paragraphs (D)(7) and (D)(8) of this rule except that:

(a) Existing UST systems installed prior to March 1, 2005, that were filled with transfers of no more than twenty-five gallons at one time are not required to be equipped to meet the spill and overfill requirements of this rule except USTs undergoing work pursuant to paragraph (C)(7)(a) of this rule;

(b) Flow restrictors in the vent lines for overfill prevention shall not be allowed on any type of suction system, USTs filled by a pressurized delivery system, or USTs utilizing coaxial stage I vapor recovery systems; and

(c) Flow restrictors in vent lines may not be used to meet overfill prevention requirements when an existing flow restrictor is replaced.

(5) Existing UST systems containing hazardous substances as defined in rule 1301:7-9-03 of the Administrative Code shall be equipped, operated and maintained pursuant to the new UST system requirements defined in paragraph (B) of this rule except that:

(a) Existing UST systems installed prior to March 1, 2005, are not required to be equipped with containments in all of the locations described in paragraph (B)(1)(c) of this rule. UST systems shall have sufficient containments to demonstrate that the UST system is fully secondarily contained;

(b) Existing UST systems installed prior to March 1, 2005, are not required to be equipped with isolation valves between the piping and the tank pursuant to paragraph (D)(3)(b) of this rule;

(c) Existing UST systems installed prior to March 1, 2005, that are filled with transfers of no more than twenty-five gallons at one time are not required to be equipped to meet the spill and overfill requirements of paragraph (D)(7) of this rule; and

(d) Existing underground piping and manifolds that convey hazardous substance under suction shall be equipped with full secondary containment pursuant to paragraph (B)(1)(b) of this rule.

(6) Any work performed on an existing UST system that requires a permit pursuant to rule 1301:7-9-10 of the Administrative Code or as otherwise provided in this paragraph, shall meet the following requirements:

(a) If work causes an existing UST to be replaced, the new UST shall be equipped, operated and maintained pursuant to the new UST requirements defined in paragraph (B)(1)(a) of this rule. The following requirements may also apply:

(i) Tank top containments shall be installed pursuant to paragraph (B)(1)(c)(i) of this rule; and

(ii) Existing piping and dispenser containments shall be installed, replaced, or modified pursuant to paragraphs (C)(7)(b) to (C)(7)(d) of this rule;

(b) If piping is installed, replaced, modified, or undergoes major repair that affects more than fifty percent of an existing piping run measured as the length of the pipe between the connection at the UST and the furthest dispenser or use location associated with the UST connection that routinely contains regulated substances, then the piping and associated containments shall be equipped, operated and maintained pursuant to the new piping and containment requirements defined in paragraphs (B)(1)(b) and (B)(1)(c) of this rule. The measurements relating to the fifty percent threshold shall be cumulative and shall include all work performed after May 16, 2011;

(c) If a new fuel dispenser is installed where there previously was no fuel dispenser at an existing UST site then a new containment shall be installed pursuant to paragraphs (D)(5) and (D)(6) of this rule; and

(d) If an existing fuel dispenser is replaced with another fuel dispenser and all of the equipment needed to connect the dispenser to the underground storage tank system is installed, replaced, modified or undergoes a major repair at the same time, then a new containment shall be installed pursuant to paragraph (D)(5) and (D)(6) of this rule. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers, flexible connectors, and other

transitional components that are underneath the dispenser and connect the dispenser to the underground piping.

(7) If an owner and operator elects to equip an UST system in a manner that exceeds the requirements of this rule, the owner and operator is only required to maintain the UST system to the extent required by this rule.

(8) Existing UST systems that undergo a change of product shall meet compatibility requirements described in paragraph (D)(9) of this rule.

(D) Design, construction, operation and maintenance of UST systems.

(1) USTs shall be designed and constructed pursuant to one of the following:

(a) The tank is constructed of fiberglass-reinforced plastic in compliance with Underwriters Laboratories Standard 1316-06, "Safety Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures";

(b) The tank is constructed of metal in compliance with Underwriters Laboratories Standard 58-96, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," coated with a suitable dielectric material and cathodically protected using:

(i) Field-installed cathodic protection systems that are designed by a corrosion expert; or

(ii) The tank and cathodic protection system comply with the requirements of one of the following:

(a) Underwriters Laboratories Standard 1746-07, "Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks";

(b) National Association of Corrosion Engineers International Standard Practice SP-0285-11, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection"; or

(c) Steel Tank Institute STI-P3-15, "Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks"; or

(c) The tank is constructed of a steel-fiberglass-reinforced-plastic composite in compliance with:

(i) Underwriters Laboratories Standard 1746-07, "External Corrosion Protection Systems for Underground Storage Tanks", or

(ii) Steel Tank Institute ACT-100 Specification F894-14, "Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks."

(2) USTs shall be operated and maintained pursuant to all of the following:

(a) Owners and operators shall use UST system components that are compatible with the regulated substance stored in the UST system pursuant to the compatibility requirements described in paragraph (D)(9) of this rule;

(b) If the UST system is used to store alcohol blends, the owner and operator shall ensure compatibility by complying with the compatibility requirements described in paragraph (D)(9) of this rule;

(c) Owners and operators shall inspect all accessible UST and piping components at least once a year for evidence of degradation and shall correct any deficiencies that could cause a release or prevent release detection equipment from working properly. At a minimum, USTs and piping shall be monitored for any visible corrosion, pealing, cracking or excessive distortion of the UST and piping components;

(d) Operation and maintenance of corrosion protection.

(i) All corrosion protection systems shall be operated and maintained to continuously provide corrosion protection.

(ii) All UST systems equipped with cathodic protection systems shall be tested for proper operation by a cathodic protection tester within six months of installation and at least every three years thereafter.

(iii) UST systems with impressed current cathodic protection systems shall be inspected every sixty days by the owner and operator to ensure that the equipment is operating properly.

(iv) For UST systems using cathodic protection, records of the testing of the cathodic protection system shall be maintained in compliance with this rule. These records shall provide the following:

(a) The results from the last two tests required in paragraph (D)(2)(d)(ii) of this rule; and

(b) The results of the last six inspections required by paragraph (D)(2)(d)(iii) of this rule.

(v) The following codes of practice may be used to comply with paragraph (D)(2)(d) of this rule:

(a) National Association of Corrosion Engineers International Standard Practice SP0285-11, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection";

(b) National Association of Corrosion Engineers International Test Method TM0101-12, "Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage Tanks";

(c) National Association of Corrosion Engineers International Test Method TM0497-12, "Measurement Techniques Related to Criteria for Cathodic Protection on Underground and Submerged Metallic Piping Systems";

(d) Steel Tank Institute RP R051-06, "Cathodic Protection Testing Procedures for STI-P3 USTs"; or

(e) Steel Tank Institute RP R972-10, "Recommended Practice for the Addition of Supplemental Anodes to STI-P3 USTs".

(vi) If cathodic protection testing indicates failure or inconclusive results, or if the cathodic protection equipment is turned off or disconnected from the UST system for more than twelve months, then the UST system shall be assessed by a corrosion expert as defined in rule 1301:7-9-02 of the Administrative Code to affirm that the corrosion protection equipment is performing pursuant to the requirements of this rule.

(e) UST systems internally lined to meet cathodic protection requirements shall comply with the following:

(i) Within ten years after lining, and every five years thereafter, the lined tank shall be internally inspected to determine if it is structurally sound with the lining still performing in accordance with American Petroleum Institute 1631-01, "Interior Lining and Period Inspection of Underground Storage Tanks"; and

(a) A modification permit shall be obtained prior to performing work in accordance with rule 1301:7-9-10 of the Administrative Code;

(b) Video camera inspections shall not be used to meet the requirements of this paragraph;

(c) The use of personnel and lining materials listed pursuant to rule 1301:7-7-34 of the Ohio Fire Code is not required; and

(d) After the effective date of this rule, cathodic protection may not be added to previously lined USTs;

(ii) Any UST system internally lined that fails to meet the criteria described in this paragraph shall be removed in accordance with rule 1301:7-9-12 of the Administrative Code; and

(iii) UST systems internally lined that also have cathodic protection that meets the requirements of paragraphs (D)(1) to (D)(2)(d)(iv) of this rule do not have to comply with paragraph (D)(2)(e) of this rule.

(f) Non-metallic UST systems internally lined for compatibility purposes shall comply with the following:

(i) UST lining activities shall be in accordance with American Petroleum Institute 1631-01, "Interior Lining and Periodic Inspection of Underground Storage Tanks" and with Fiberglass Tank and Piping Institute RP T-95-02, "Remanufacturing of FRP Underground Storage Tanks";

(ii) A modification permit shall be obtained prior to performing lining work in accordance with rule 1301:7-9-10 of the Administrative Code;

(iii) The use of personnel and lining materials listed pursuant to rule 1301:7-7-34 of the Ohio Fire Code is not required; and

(iv) The periodic re-inspection of previously lined fiberglass USTs is not required.

(g) All corrosion protection systems on UST systems shall be installed, operated and maintained in a manner that minimizes any adverse effects on adjacent underground metallic structures, including but not limited to, natural gas pipe lines, telecommunication cables and water and sewage pipelines. If at any time a corrosion protection system on an UST system is believed to have adversely affected an adjacent underground metallic structure, owners and operators shall immediately participate in the testing and remediation of any such adverse effects.

(3) Piping that routinely contains regulated substances shall be designed and constructed pursuant to the following:

(a) The piping is constructed of fiberglass-reinforced plastic, flexible plastic technology piping or other non-metallic piping in compliance with:

(i) Underwriters Laboratories 971-05, "Nonmetallic Underground Piping for Flammable Liquids" or

(ii) National Fire Protection Association 30-15, "Flammable and Combustible Liquids Code";

(b) The piping is constructed of metal in compliance with:

(i) Underwriters Laboratories Standard 971A-06, "Outline of Investigation for Metallic Underground Fuel Pipe";

(ii) National Fire Protection Association 30-15 "Flammable and Combustible Liquids Code"; or

(iii) American Society of Mechanical Engineers B31.3-14, "ASME Code for Pressure Piping B31 – Process Piping";

(c) Piping that is constructed of metal that routinely contains regulated substances that is in contact with the ground shall be coated with a suitable dielectric material and cathodically protected using:

(i) Field-installed cathodic protection systems that are designed by a corrosion expert; or

(ii) The piping and cathodic protection systems meet the requirements of one of the following:

(a) American Petroleum Institute RP 1632-02, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems";

(b) National Association of Corrosion Engineers International Standard Practice SP0169-13, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems";

(c) Steel Tank Institute RP892-06, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems"; or

(d) National Association of Corrosion Engineers International Test Method TM0497-12, "Measurement Techniques Related to Criteria for Cathodic Protection on Underground and Submerged Metallic Piping Systems"; and

(d) Piping that routinely contains regulated substances shall be installed with an isolation valve to allow for the separation of the piping from the UST. The isolation valve shall be easily accessible.

(e) Piping, including vent piping and ancillary equipment, shall not be configured in a manner that will cause unintentional syphoning, backflow or over-pressurization of the UST system or cause the defeat of shear valves, check valves, release detection equipment, or similar components.

(4) Piping that routinely contains regulated substances shall be operated and maintained pursuant to all of the following:

(a) Owners and operators shall use piping system components that are compatible with the regulated substance stored in the UST system pursuant to paragraph (D)(9) of this rule;

(b) Owners and operators shall inspect all accessible piping components at least once a year for evidence of degradation and shall correct any deficiencies that could cause a release or prevent release detection equipment from working properly pursuant to paragraph (D)(2)(c) of this rule;

(c) All corrosion protection systems for metallic piping shall be operated and maintained pursuant to the schedules and record keeping requirements found in paragraph (D)(2)(d) of this rule;

(d) Repairs and modifications to piping shall be in accordance with the following:

(i) Metal pipe sections and fittings shall be repaired or modified using new sections and fittings. Unions shall occur in containment sumps that meet the requirements of paragraphs (D)(5) and (D)(6) of this rule; and

(ii) Connections for non-metallic piping shall be in accordance with the manufacturer's requirements or codes of practice developed by nationally recognized associations or independent testing laboratories or other industry best practices.

(5) Containment sumps shall be properly designed and constructed pursuant to all of the following:

(a) Each containment sump shall be large enough to allow for the visible inspection and access of all components within the containment sump;

(b) Each penetration through a containment sump shall be water tight while allowing for any forces that may act on the penetration;

(c) Each containment sump shall be designed to minimize the infiltration of surface water into the containment area; and

(d) Covers for containment sumps shall be designed or managed to allow access to the containment sump within four hours of a request by the state fire marshal or local fire official.

(6) Containment sumps shall be properly operated and maintained pursuant to the following:

(a) All containments sumps shall be inspected at least once a year for proper operation and for the presence of water, regulated substances and debris in accordance with the following:

(i) Containment sumps shall be inspected for evidence of excessive distortion, cracking or gross failure of the containment sumps and any penetration fittings;

(ii) All water and debris shall be removed and properly disposed; and

(iii) All regulated substances shall be removed and properly disposed;

(b) The following containment sumps shall be tested for tightness every three years in accordance with paragraph (F)(3) of rule 1301:7-9-07 of the Administrative Code:

(i) All containment sumps installed on new UST systems after March 1, 2005;

(ii) All containment sumps associated with UST systems containing hazardous substances pursuant to rule 1301:7-9-03 of the Administrative Code;

(iii) All containment sumps installed on existing UST systems as a result of activities required by paragraph (C)(6)(c) or (C)(6)(d) of this rule; and

(iv) All other containment sumps associated with UST systems where the containment sump serves as part of the interstitial monitoring system.

(c) Double wall containment sumps may forgo the tightness test requirement described in paragraph (D)(6)(b) of this rule if the interstice of the double wall is checked for a leak at least once a year; and

(d) The addition of internal lining in the field to containment sumps is allowed. Owners and operators shall comply with any conditions imposed by the state fire marshal on the use of internal lining. For a containment sump described in paragraph (D)(6)(b) of this rule, owners and operators shall obtain approval from the manufacturer of the containment sump prior to the addition of internal lining. All lining activity shall be performed by a person recognized by the manufacturer to perform the lining of the containment.

(7) Spill prevention equipment and overfill prevention equipment shall be designed and constructed pursuant to all of the following:

(a) Owners and operators shall install spill prevention equipment with a capacity of at least five gallons that will prevent the release of product into the environment when the transfer hose is detached from the fill pipe; and

(b) Owners and operators shall install overfill prevention equipment that will achieve one of the following:

(i) Automatically shut off flow into the tank when the tank is no more than ninety-five per cent full; or

(ii) Alert the transfer operator when the tank is no more than ninety per cent full by restricting the flow into the tank or triggering a high-level alarm; or

(iii) Restrict flow thirty minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.

(8) Spill prevention equipment and overfill prevention equipment shall be properly operated and maintained pursuant to all of the following:

(a) Owners and operators of all UST systems shall ensure that releases due to spilling or overfilling do not occur. The owner and operator shall 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) The owner and operator of all UST systems shall report, investigate and clean up any spills and overfills in compliance with rule 1301:7-9-13 of the Administrative Code;

(c) No later than October 13, 2018, owners and operators shall inspect all spill prevention equipment at least every thirty days. Spill prevention equipment at UST systems receiving deliveries at intervals greater than every thirty days may be inspected prior to and following each delivery. Inspections shall consist of:

(i) Visual inspection for damage;

(ii) Removing liquid or debris;

(iii) Inspection for and the removal of obstructions in the fill pipe;

(iv) Inspection of the fill cap to make sure it is securely on the fill pipe; and

(v) For double walled spill prevention equipment with interstitial monitoring, inspection for a leak in the interstitial area;

(d) No later than October 13, 2018, owners and operators shall test all spill prevention equipment in the following manner:

(i) Spill prevention equipment shall be tightness tested at least once every three years in accordance with paragraph (F)(3) of rule 1301:7-9-07 of the Administrative Code to ensure the equipment is liquid tight; or

(ii) For double wall spill prevention equipment, the integrity of both walls may be monitored every thirty days as described in paragraph (D)(8)(c) of this rule; and

(e) No later than October 13, 2018, owners and operators shall test overfill prevention equipment at least once every three years. At a minimum, the inspection shall ensure that overfill prevention equipment is set to activate at the correct level specified in paragraph (D)(7)(a)(ii) of this rule and will activate when regulated substances reaches that level.

(9) Owners and operators shall use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

(a) For new and existing UST systems undergoing a change of product, owners and operators shall demonstrate compatibility of the UST system, including the UST, piping, containment sumps, ancillary equipment, release detection equipment, spill prevention equipment, and overfill prevention equipment using one of the following options:

(i) Certification or listing of the UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance;

(ii) Written approval by the equipment or component manufacturer specific to the regulated substance; or

(iii) Another option determined by the state fire marshal to be no less protective to human health and the environment than the options listed in paragraph (D)(9)(a)(i) or (D)(9)(a)(ii) of this rule.

(b) Owners and operators shall maintain records in accordance with paragraph (E)(5) of this rule demonstrating compliance with this paragraph.

(E) General performance standards, permits, certified UST installers and inspectors.

(1) All UST systems shall be properly designed, constructed, installed, modified, repaired, operated and maintained in accordance with the requirements of this rule. UST system components not specifically addressed in this rule shall comply with the manufacturer's instructions or codes of practice developed by nationally recognized associations or independent testing laboratories or other industry best practices.

(2) All UST systems shall be properly designed, constructed, installed, modified, repaired, operated and maintained by a qualified person in accordance with the requirements of this rule.

(a) Any person performing activities in accordance with this rule shall check paragraph (C) of rule 1301:7-9-10 of the Administrative Code prior to performing the activities to determine if a permit is required. Any activities requiring a permit shall be overseen by a certified UST installer and a certified UST inspector as required in paragraph (D) of rule 1301:7-9-10 of the Administrative Code.

(b) For activities that do not require a permit, or if the rule does not specifically identify a type of qualified person, then owners and operators may allow any person to perform such activities provided they follow manufacturer's instructions or codes of practice developed by nationally recognized associations or independent testing laboratories or other industry best practices.

(3) The following codes of practice may be used to comply with this rule:

(a) American Petroleum Institute 1615-11, "Installation of Underground Petroleum Storage System";

(b) American Petroleum Institute RP 1626-12, "Storing and Handling Ethanol and Gasoline-ethanol Blends at Distribution Terminals and Filling Stations";

(c) American Petroleum Institute 2200-15, ''Repairing Hazardous Liquid Pipelines";

(d) Fiberglass Tank and Piping Institute RP T-95-02, Remanufacturing of FRP Underground Storage Tanks;

(e) National Fire Protection Association 30-15, "Flammable and Combustible Liquids Code";

(f) National Fire Protection Association 30A-15, "Code for Motor Fuel Dispensing Facilities and Repair Garages";

(g) National Fire Protection Association 407-17, "Standard for Aircraft Fuel Servicing";

(h) Petroleum Equipment Institute RP100-11, "Recommended Practices for Installation of Underground Liquid Storage Systems";

(i) Petroleum Equipment Institute RP900-08, "Recommended Practices for the Inspection and Maintenance of UST Systems";

(j) Petroleum Equipment Institute RP1000-14, "Recommended Practices for the Installation of Marine Fueling Systems"; or

(k) Petroleum Equipment Institute RP1200-12, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

(4) No later than October 13, 2018, owners and operators shall perform a walkthrough inspection and complete a walkthrough inspection checklist on a form prescribed by the state fire marshal.

(a) Every month, the following equipment shall be checked as part of the walkthrough inspection:

(i) Visually check spill prevention equipment for damage;

(ii) Remove liquid and debris from spill prevention equipment;

(iii) Visually check and remove obstructions from fill pipe;

(iv) Check fill cap to ensure it is securely on the fill pipe;

(v) For double wall spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area;

(vi) Check release detection equipment to confirm operation with no alarms or other unusual operating conditions present; and

(vii) Check to ensure records of release detection testing are reviewed and current.

(b) Annually, the following equipment shall be checked as part of the walkthrough inspection:

(i) Visually check containment sumps for damage;

(ii) Visually check containment sumps for leaks;

(iii) Visually check containment sumps for releases to the environment;

(iv) Remove liquid and debris from containment sumps;

(v) For double wall containment sumps with interstitial monitoring, check for a leak in the interstitial area; and

(vi) For hand held release detection equipment, check devices such as gauge sticks for operability and serviceability.

(c) Spill prevention equipment at UST systems receiving deliveries at intervals greater than every month may be checked prior to each delivery in order to meet the requirements in paragraph (E)(4)(a) of this rule.

(d) The following containment sumps are required to comply with the walkthrough inspection requirements described in paragraph (E)(4)(b) of this rule:

(i) All containments sumps installed on new UST systems after March 1, 2005;

(ii) All containments sumps associated with UST systems containing hazardous substances pursuant to rule 1301:7-9-03 of the Administrative Code;

(iii) All containments sumps installed on existing UST systems as a result of activities required by paragraph (C)(7)(c) or (d) of this rule; and

(iv) All containment sumps associated with UST systems where the containment sump serves as part of the interstitial monitoring system.

(5) Owners and operators shall maintain records demonstrating compliance with the requirements of this chapter as follows:

(a) The records of operation and maintenance walkthrough inspections shall be maintained for at least one year;

(b) The records of testing of spill prevention equipment, overfill prevention equipment, containment sumps, and written documentation of all calibration, maintenance, and repair of equipment permanently located at the facility shall be maintained for at least three years;

(c) The records demonstrating compatibility shall be maintained for as long as the UST system is used to store the regulated substance;

(d) Any schedules of required calibration and maintenance provided by the equipment manufacturer shall be retained for five years;

(e) Owners and operators shall provide the state fire marshal access to all records within one business day of a request; and

(f) Within thirty days of transfer of ownership of an UST system, the transferor shall provide the transferee with all records identified in paragraph (E)(4) of this rule or with equivalent copies of said records.

(6) Performing work pursuant to this rule does not relieve a person engaged in underground storage tank activity from the obligation of complying with any other applicable federal, state, or local laws and regulations, including but not limited to, the Ohio Fire Code or the Ohio Building Code, etc.

(7) A tightness test shall be performed on any new or existing UST system component that undergoes work requiring an installation, modification or major repair permit under paragraph (E)(4) of this rule prior to placing the UST system into operation. No UST system shall be placed into operation until a passing tightness test result is obtained for the UST system component undergoing work.

(8) Other design, construction, installation, operation and maintenance methods may be used in place of any requirements or methods described in this rule if an owner and operator demonstrates that the alternative method is no less protective of human health and the environment than the method or requirement specified in this rule, and the state fire marshal approves the alternative method in writing prior to the use of the method. If the alternative method is approved, the owner and operator shall comply with any terms and conditions imposed on its use by the state fire marshal.

(F) Requirements for airport hydrant systems or field constructed tank systems.

(1) New and existing airport hydrant systems or new and existing field constructed tank systems shall comply with the design, installation, construction, operation, and maintenance

requirements found in Subpart K of Part 280 of Title 40 Chapter I of the Code of Federal Regulations except that:

(a) Qualifying systems shall comply with the deadlines and conditions identified in rule 1301:7-9-01 of the Administrative Code;

(b) Existing USTs lined to meet cathodic protection requirements shall comply with paragraph (D)(2)(e) of this rule.; and

(c) In addition to completing the walkthrough inspection requirements pursuant to paragraph (E)(4) of this rule, owners and operators shall visually check hydrant pits and hydrant piping vaults for evidence of leaks or damage and remove any liquid or debris found. The check shall be performed monthly, unless confined spaced entry is required, in which case the check is required at least annually.

(2) New and existing airport hydrant systems or new and existing field constructed tank systems shall comply with the release detection, operation, maintenance, and walkthrough inspection requirements found in paragraph (H) of Rule 1301:7-9-07 of the Administrative Code.

(3) Owners and operators of new and existing airport hydrant systems or new and existing field constructed tank systems may request to use alternative methods pursuant to paragraph (E)(8) of this rule.

1301:7-9-05 **Financial responsibility for petroleum underground storage tank systems.**

(A) Purpose.

For the purpose of prescribing rules pursuant to division (B) of section 3737.882 of the Revised Code, the state fire marshal hereby adopts this rule to establish financial responsibility requirements for underground storage tank systems containing petroleum. This rule is adopted by the state fire marshal in accordance with Chapter 119. of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Applicability.

(1) Except as otherwise provided in paragraphs (B)(2) and (B)(3) of this rule, owners and operators of all petroleum UST systems within this state shall comply with this rule by the applicable date established in paragraph (D) of this rule.

(2) Federal government entities whose debts and liabilities are the debts and liabilities of the United States are exempt from the requirements of this rule.

(3) The requirements of this rule do not apply for any of the following petroleum UST systems:

(a) Any UST system holding hazardous wastes listed or identified under Chapter 3745-51 of the Administrative Code, or a mixture of such hazardous waste and petroleum;

(b) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Federal Water Pollution Control Act (33 U.S.C.A. 1251 and following);

(c) Equipment or machinery that contains petroleum for operational purposes such as hydraulic lift tanks and electrical equipment tanks;

(d) Any petroleum UST system whose capacity is one hundred ten gallons or less;

(e) Any UST system that contains a de minimis concentration of petroleum;

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

(g) Wastewater treatment tank systems containing petroleum;

(h) Any petroleum UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C.A. 2011 and following);

(i) Any petroleum UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the United States nuclear regulatory commission under 10 C.F.R. Part 50, Appendix A.

(C) If the owner and operator of a petroleum UST system are separate persons, only one of such persons is required to obtain and demonstrate financial responsibility for that particular petroleum UST system; however, both persons are liable in event of noncompliance. Regardless of which person complies, the

date for compliance with this rule regarding a particular petroleum UST system as set forth in paragraph (D) of this rule shall be determined by the characteristics of the owner.

(D) Compliance dates.

Owners and operators of petroleum UST systems shall comply with the requirements of this rule upon the effective date of this rule.

(E) Definitions.

For the purposes of this rule:

(1) "Accidental release" means any sudden or nonsudden release of petroleum that was neither expected nor intended by the owner or operator of the applicable UST system and that results in the need for corrective action OR compensation for bodily injury or property damage.

(2) "Chief financial officer", in the case of state or a political subdivision owner or operator, means the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the state or political subdivision.

(3) "Financial reporting year" means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

(a) A 10-K report submitted to the United States securities and exchange commission; or

(b) An annual report of tangible net worth submitted to Dun and Bradstreet; or

(c) Annual reports of tangible net worth submitted to the United States energy information administration, the United States rural utilities service, or the Ohio department of commerce; or

(d) A special report by an independent certified public accountant pursuant to paragraph (L)(4)(c) of this rule.

"Financial reporting year" may thus comprise a fiscal or a calendar year period.

(4) "Fund" is the petroleum underground storage tank financial assurance fund created by division (A) of section 3737.91 of the Revised Code.

(5) "Fund deductible" is the deductible amount for the fund established pursuant to division (E) of section 3737.91 of the Revised Code.

(6) "Legal defense cost" is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought by the following:

(a) United States environmental protection agency or the state to require corrective action or to recover the costs of corrective action;

(b) A third party for bodily injury or property damage caused by an accidental release or by any person on behalf of such a third party; or

(c) A person to enforce the terms of a financial assurance mechanism.

(7) "Occurrence" means an accident, including continuous or repeated exposure to conditions, which results in a release from a petroleum UST system. As used in this rule, the definition of "occurrence" is intended to clarify the scope of coverage under this rule and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence".

(8) "Petroleum marketing facilities" include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.

(9) "Petroleum marketers" are all persons owning petroleum marketing facilities. Persons owning other types of facilities with petroleum UST systems as well as petroleum marketing facilities are considered to be petroleum marketers.

(10) "Property damage" includes, without limitation, liability for corrective actions associated with releases from petroleum UST systems.

(11) "Provider of financial assurance" means a person that provides financial assurance to an owner or operator of a petroleum UST system through one of the mechanisms listed in paragraphs (L) to (R) of this rule including a guarantor, insurer, risk retention group, surety, or issuer of a letter of credit.

(12) "Reduced fund deductible" is the reduced deductible amount for the fund established pursuant to division (F) of section 3737.91 of the Revised Code.

(13) "Substantial governmental relationship" means the extent of a governmental relationship necessary under Ohio law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of an UST release such as conterminous boundaries, overlapping constituencies, common groundwater aquifer, or other relationship other than monetary compensation that provides a motivation for the guarantor to provide a guarantee.

(14) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular person as a result of past transactions.

(F) Amount and scope of required financial responsibility.

(1) Owners and operators of petroleum UST systems shall obtain and demonstrate for each of the petroleum UST systems within this state which they own or operate financial responsibility both for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases from the petroleum UST systems in the amount of one million dollars per occurrence.

(2) Owners and operators of petroleum UST systems shall obtain and demonstrate for each of the petroleum UST systems within this state which they own or operate financial responsibility for both taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases from the petroleum UST systems in at least the following annual aggregate amounts:

(a) For owners or operators of one to one hundred tanks within this state which comprise petroleum UST systems, one million dollars; and

(b) For owners or operators of one hundred one or more tanks within this state which comprise petroleum UST systems, two million dollars.

(3) The amounts of assurance required under paragraphs (F)(1) and (F)(2) of this rule exclude legal defense costs.

(4) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

(G) The fund.

(1) Owners and operators of petroleum UST systems shall obtain and demonstrate a valid certificate of coverage in the fund from the petroleum underground storage tank release compensation board pursuant to division (D) of section 3737.91 of the Revised Code for each tank within this state comprising a petroleum UST system.

(2) Owners and operators of petroleum UST systems within this state shall obtain and demonstrate financial responsibility for each such petroleum UST system so as to comply with the deductible coverage requirements described in paragraph (H) of this rule.

(H) Deductible coverage requirements.

(1) Subject to the limitations and requirements of paragraphs (I) and (J) of this rule, and in addition to participation in the fund, owners and operators of petroleum UST systems shall obtain and demonstrate financial responsibility for each petroleum UST system within this state using one of the mechanisms listed in paragraphs (L) to (V) of this rule in an amount equal to the following applicable per-occurrence amount:

(a) If the owner or operator has paid for the year the annual petroleum underground storage tank financial assurance fee established pursuant to division (B) of section 3737.91 of the Revised Code for the tanks comprising the petroleum UST system, the fund deductible; and

(b) If the owner or operator has paid for the year the additional fee established pursuant to division (F) of section 3737.91 of the Revised Code for the tanks comprising the petroleum UST system, the reduced fund deductible.

(2) The financial responsibility required by this paragraph shall include responsibility both for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental release from petroleum UST systems.

(I) Combination of allowable mechanisms.

(1) Each allowable mechanism described in paragraphs (L) to (V) of this rule which is used by an owner or operator to comply with paragraph (H)(1) of this rule shall include responsibility both for taking corrective action and for compensating third parties for bodily injury and property damage caused by any accidental release from petroleum UST systems.

(2) In complying with paragraph (H)(1) of this rule, owners and operators shall use only one of the mechanisms described in paragraphs (L) to (V) of this rule for any single petroleum UST system. A single allowable mechanism may specify more than one petroleum UST system for which the mechanism provides coverage.

(3) If an owner or operator uses different allowable mechanisms for different petroleum UST systems within this state to comply with paragraph (H) of this rule, each such different mechanism shall comply with paragraph (H) of this rule.

(J) Aggregate amounts for self-insurance, insurance, and risk retention group coverage.

(1) If an owner or operator uses the self-insurance mechanism described in paragraph (L) of this rule to comply with paragraph (H) of this rule for any petroleum UST system within this state, the owner or operator shall, in computing the financial test described in paragraph (L) of this rule, use the applicable annual aggregate from the following table:

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Number of tanks covered by mechanism	Per occurrence amount[a]	Annual aggregate
1-6	reduced fund deductible	reduced fund deductible
1-100	fund deductible	fund deductible
101-200	fund deductible	2 x fund deductible
201-300	fund deductible	3 x fund deductible
301 or more	fund deductible	4 x fund deductible

[a] the per-occurrence amount for the tanks covered required by paragraph (H)(1) of this rule.

(2) If an owner or operator uses the insurance or risk retention group coverage described in paragraph (N) of this rule to comply with paragraph (H) of this rule for any petroleum UST system within this state, the owner or operator shall obtain and demonstrate such coverage in at least the applicable annual aggregate amount from the following table:

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Number of tanks covered by mechanism	Per occurrence amount[a]	Annual aggregate
1-6	reduced fund deductible	2 x reduced fund deductible
1-100	fund deductible	2 x fund deductible
101-200	fund deductible	3 x fund deductible
201-300	fund deductible	4 x fund deductible
301 or more	fund deductible	5 x fund deductible

[a] the per-occurrence amount for the tanks covered required by paragraph (H)(1) of this rule.

(3) If an owner or operator uses any mechanism described in paragraph (M) or paragraphs (O) to (R) of this rule to comply with paragraph (H) of this rule for any petroleum UST system within this state, the annual aggregate amount of coverage provided by the mechanism shall be at least equal to the per-occurrence amount for the tanks required by paragraph (H)(1) of this rule.

(K) New installations or new acquisitions.

(1) If additional tanks comprising petroleum UST systems are installed, the owner and operator shall obtain and demonstrate a valid certificate of coverage in the fund from the petroleum underground storage tank release compensation board pursuant to division (D) of section 3737.91 of the Revised Code for each additional tank prior to introducing petroleum into the tank. In addition, the owner and operator shall obtain and demonstrate financial responsibility in compliance with paragraph (H) of this rule for each additional tank prior to introducing petroleum into the tank.

(2) If additional existing tanks comprising petroleum UST systems are acquired, the owner and operator shall obtain and demonstrate a valid certificate of coverage in the fund from the petroleum underground storage tank release compensation board pursuant to division (D) of section 3737.91 of the Revised Code for each additional tank prior to bringing the tank into operation. In addition, the owner and operator shall obtain and demonstrate financial responsibility in compliance with paragraph (H) of this rule for each additional tank prior to bringing the tank into operation.

(3) If an owner or operator is using self-insurance, insurance, or risk retention group coverage to comply with paragraph (H) of this rule, and if the number of additional tanks comprising petroleum UST systems within this state installed or acquired results in such a number of tanks so as to require a greater annual aggregate amount of coverage pursuant to paragraphs (J)(1) or (J)(2) of this rule, the amount of such additional annual aggregate coverage necessary to comply with paragraphs (J)(1) or (J)(2) of this rule shall be obtained and demonstrated by the owner and operator by the first-occurring effective date anniversary of the self-insurance, insurance, or risk retention group coverage used to provide coverage.

(L) Financial test of self-insurance.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by passing a financial test as specified in this paragraph. To pass the financial test of self-insurance, the owner or operator shall meet the criteria of this paragraph based on year-end financial statement for the latest completed fiscal year.

(2) The owner or operator shall have a tangible net worth of at least ten times the sum of the following:

(a) The applicable annual aggregate required by paragraph (J)(1) of this rule;

(b) The total of the applicable aggregate amount required by 40 C. F. R. 280.93 based on the number of USTs located in states other than Ohio for which a financial test is used to demonstrate financial responsibility to the United States environmental protection agency under 40 C.F.R. 280.95 or to another state implementing agency under a state program approved by the United States environmental protection agency under 40 C.F.R. Part 281;

(c) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to the United States environmental protection agency under 40 C. F. R. 264.101, 264.143, 264.145, 265.143, 265.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by the United States environmental protection agency under 40 C.F.R. Part 271 including, without limitation, the Ohio environmental protection agency under Chapter 3745 of the Administrative Code; and

(d) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to the United States environmental protection agency

under 40 C.F.R. 144.63 or to a state implementing agency under a state program authorized by the United States environmental protection agency under 40 C.F.R. Part 145 including, without limitation, the Ohio environmental protection agency under Chapter 3745 of the Administrative Code and the Ohio department of natural resources under Chapter 1501:9 of the Administrative Code.

(3) The owner or operator shall maintain a letter signed by the chief financial officer worded as specified in paragraph (L)(6) of this rule.

(4) The owner or operator shall comply with at least one of the following:

(a) File financial statements annually with the United State securities and exchange commission, the United States energy information administration, the United States rural utilities service, or the Ohio department of commerce;

(b) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet shall have assigned the firm a financial strength rating of 4A or 5A; or

(c) Have an independent certified public accountant conduct an audit or a review of the fiscal year-end financial statements of the owner or operator and prepare a special report wherein the independent certified public accountant states both of the following:

(i) He has compared the data that the letter form the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator with the amounts in such financial statements; and

(ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.

This special report shall be maintained by the owner or operator with the letter required by paragraph (L)(3) of this rule.

(5) The owner's or operator's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(6) To demonstrate that it meets the financial test under this rule, the chief financial officer of the owner or operator, shall sign, within one hundred twenty days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as written in Appendix A, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted.

(7) Within one hundred twenty days of the end of each subsequent financial reporting year, owners and operators using the self-insurance mechanism shall evaluate whether they meet the financial test described in this paragraph. If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator shall obtain and demonstrate alternative coverage within one hundred fifty days of the end of the year for which financial statements have been prepared.

(8) The state fire marshal may require reports of financial condition at any time from the owner or operator. If the state fire marshal determines, on the basis of such reports or other information, that the owner or operator no longer meets the financial test requirements of this paragraph, the owner

or operator shall obtain and demonstrate alternate coverage in compliance with this rule within thirty days after notification of such a determination by the state fire marshal.

(9) If the owner or operator fails to obtain alternate assurance within one hundred fifty days of the end of the financial reporting year after finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within thirty days of notification by the state fire marshal that he or she no longer meets the requirements of the financial test, the owner or operator shall notify the state fire marshal of such failure within ten days.

(M) Guarantee.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by obtaining a guarantee that conforms to the requirements of this paragraph.

(2) The guarantor shall be in compliance with all applicable sections of Title XXXIX of the Revised Code.

(3) An owner or operator who uses a guarantee to satisfy the requirements of paragraph (H) of this rule shall establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the state fire marshal. This standby trust fund shall meet the requirements specified in paragraph (R) of this rule.

(4) The guarantee shall be worded as written in Appendix B, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

(5) The owner or operator shall maintain an original of the guarantee worded as specified in paragraph (M)(4) of this rule.

(N) Insurance and risk retention group coverage.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by obtaining liability insurance that conforms to the requirements of paragraphs (N)(2) and (N)(3) of this rule from an insurer or risk retention group in compliance with Title XXXIX of the Revised Code. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(2) Each insurance policy shall be amended by an endorsement worded as specified in Appendix C entitled "(a) endorsement" or evidenced by a certificate of insurance worded as specified in Appendix C entitled "(b) certificate of insurance", except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

(3) The insurer or risk retention group which issues a policy shall provide to the state fire marshal copies of all payments made under the policy within ten days of making payment.

(4) If, after a payment under the policy by an insurer or risk retention group, the state fire marshal determines that the annual aggregate remaining under the policy is less than the applicable per-occurrence amount required under paragraph (H)(1) of this rule for any tank comprising a petroleum UST system within this state, the owner or operator shall obtain and demonstrate alternate coverage in compliance with this rule within thirty days after notification of such a determination by the state fire marshal.

(5) The owner or operator shall maintain a copy of either the endorsement or certificate of insurance worded as specified in paragraph (N)(2) of this rule.

(O) Surety bond.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by obtaining a surety bond that conforms to the requirements of paragraphs (O)(2) and (O)(3) of this rule. The surety company issuing the bond shall be in compliance with all applicable sections of Title XXXIX of the Revised Code.

(2) The surety bond shall be worded as written in Appendix D, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

(3) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

(4) The owner or operator who uses a surety bond to satisfy the requirements of paragraph (H) of this rule shall establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond shall be deposited directly into the standby trust fund in accordance with instructions from the state fire marshal under paragraphs (AA)(1) to (AA)(3) of this rule. This standby trust fund shall meet the requirements specified in paragraph (H) of this rule.

(5) The owner or operator shall maintain an original of the surety bond worded as specified in paragraph (O)(2) of this rule.

(P) Letter of credit.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by obtaining an irrevocable standby letter of credit that conforms to the requirements of paragraph (P)(2) of this rule. The issuing institution shall be an entity that has the authority to issue letters of credit in the state of Ohio and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(2) The letter of credit shall be worded as written in Appendix E, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

(3) An owner or operator who uses a letter of credit to satisfy the requirements of paragraph (H) of this rule shall also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the state fire marshal shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the state fire marshal under paragraphs (AA)(1) to (AA)(3) of this rule. This standby trust fund shall meet the requirements specified in paragraph (H) of this rule.

(4) The letter of credit shall be irrevocable with a term specified by the issuing institution. The letter of credit shall provide that credit be automatically renewed for the same term as the original term, unless, at least one hundred twenty days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit.

Under the terms of the letter of credit, the one hundred twenty days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

(5) The owner or operator shall maintain an original of the letter of credit worded as specified in paragraph (P)(2) of this rule.

(Q) Trust fund.

(1) An owner or operator may satisfy the requirements of paragraph (H) of this rule by establishing a trust fund that conforms to the requirements of this paragraph. The trustee shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency, the Ohio department of commerce, or an agency of the state in which the fund is established.

(2) The wording of the trust agreement shall be identical to the wording specified in Appendix F of this rule, and must be accompanied by a formal certification of acknowledgement as specified in Appendix G of this rule.

(3) The trust fund, when established, shall be funded for the applicable full required amount of coverage specified in paragraph (H)(1) of this rule.

(4) If the value of the trust fund is greater than the applicable required amount of coverage specified in paragraph (H)(1) of this rule, the owner or operator may submit a written request to the state fire marshal for release of the excess if such a release is not provided for under the terms of the trust agreement.

(5) If other financial assurance as specified in paragraph (W) of this rule is substituted for all of the trust fund, the owner or operator may submit a written request to the state fire marshal for release of the excess.

(6) Within sixty days after receiving a request from the owner or operator for release of funds as specified in paragraph (Q)(4) or (Q)(5) of this rule, the state fire marshal shall instruct the trustee to release to the owner or operator such funds as the state fire marshal specifies in writing.

(7) The owner or operator shall maintain an original of the trust agreement and certification worded as specified in paragraphs (R)(2) and (R)(3) of this rule.

(R) Standby trust fund.

(1) An owner or operator using any one of the mechanisms authorized by paragraphs (M), (O), (P), or (U) of this rule shall establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency, the Ohio department of commerce, or an agency of the state in which the fund is established.

(2) The standby trust agreement, or trust agreement, shall be worded as written in Appendix F, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

(3) The standby trust agreement or trust agreement shall be accompanied by a formal certification of acknowledgement worded as written in Appendix G.

(4) The state fire marshal may instruct the Trustee to refund the balance of the standby trust fund or trust fund to the provider of financial assurance if the state fire marshal determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund or trust fund was established.

(5) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.

(6) The owner or operator shall maintain an original of the standby trust agreement and certification worded as specified in paragraphs (R)(2) and (R)(3) of this rule.

(S) State or political subdivision bond rating test.

(1) Only the state or a political subdivision owner or operator may use the state or political subdivision bond rating test established in this paragraph to satisfy the requirements of paragraph (H) of this rule.

(2) The state or a general purpose political subdivision owner or operator, or the state or a political subdivision serving as a guarantor may satisfy the requirements of paragraph (H) of this rule by having a currently outstanding issue or issues of general obligation bonds of one million dollars or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where the state or political subdivision has multiple outstanding issues, or where the state or political subdivision's bonds are rated by both Moody's and Standard & Poor's, the lowest rating shall be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance shall not be considered in determining the amount of applicable bonds outstanding.

(3) A political subdivision owner or operator, or political subdivision serving as a guarantor that is not a general purpose political subdivision and does not have the legal authority to issue general obligation bonds may satisfy the requirements of paragraph (H) of this rule by having a currently outstanding issue or issues of revenue bonds of one million dollars or more, excluding refunded issues, and by also having a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the political subdivision. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond shall be used to determine eligibility. Bonds that are backed by credit enhancement shall not be considered in determining the amount of applicable bonds outstanding.

(4) The state or a political subdivision owner or operator, or the state or a political subdivision serving as a guarantor shall maintain a copy of its bond rating published within the last twelve months by Moody's or Standard & Poor's.

(5) To demonstrate that it meets the state or political subdivision bond rating test set forth in this paragraph, the chief financial officer of the state or a general purpose political subdivision owner or operator, or the chief financial officer of the state or a political subdivision service as a guarantor shall sign a letter worded exactly as written in Appendix H, except that the instructions in square brackets are to be replaced by the relevant information and the square brackets deleted.

(6) To demonstrate that it meets the state or political subdivision bond rating test set forth in this paragraph, the chief financial officer of a political subdivision owner or operator, or a political

subdivision serving as a guarantor other than a general purpose political subdivision shall sign a letter worded exactly as written in Appendix I, except that the instructions in square brackets are to be replaced by the relevant information and the square brackets deleted.

(7) The state fire marshal may require reports of financial condition at any time from the state or a political subdivision owner or operator, or the state or a political subdivision serving as a guarantor. If the state fire marshal determines, on the basis of such reports or other information, that the state of a political subdivision owner or operator, or the state or a political subdivision serving as a guarantor, no longer meets the state or political subdivision bond rating test requirements of this paragraph, the state or a political subdivision owner or operator shall obtain alternative coverage within thirty days after notification of such finding.

(8) If the state or a political subdivision owner or operator using this bond rating test to provide financial assurance finds that it no longer meets the state or political subdivision bond rating test requirements, the state or a political subdivision owner or operator shall obtain alternative coverage within one hundred fifty days of the change in status.

(T) State or political subdivision financial test.

(1) The state or a political subdivision owner or operator may satisfy the requirements of paragraph (H) of this rule by passing the state or political subdivision financial test specified in this paragraph. To be eligible to use the state or political subdivision financial test, the state or a political subdivision owner or operator shall have the ability and authority to asses and levy taxes or to freely establish fees and charges. To pass the state or political subdivision financial test, the state or political subdivision owner or operator shall meet the criteria established in paragraphs (T)(2)(b) and (T)(2)(c) of this rule based on year-end financial statements for the latest completed fiscal year.

(2)

(a) The state or a political subdivision owner or operator shall have the following information available, as shown in the year-end financial statement for the latest completed fiscal year:

(i) Total revenues: consists of the sum of general fund operating and non-operating revenues including net state or local taxes (as applicable), licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprises, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this state or political subdivision financial test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the state or political subdivision using the state or political subdivision financial test (interfund transfers), liquidation of investments, and issuance of debt.

(ii) Total expenditures: consists of the sum of general fund operating and non-operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues. For purposes of this state or political subdivision financial test, the calculation of total expenditures shall exclude all transfers between funds

under the direct control of the state or political subdivision using this state or political subdivision financial test (interfund transfers).

(iii) Local revenues: consists of total revenues (as defined in paragraph (T)(2)(a)(i) of this rule) minus the sum of all transfers from other governmental entities, including all monies received from federal, state, or local government sources.

(iv) Debt service: consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on non-interest bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

(v) Total funds: consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the state's or political subdivision's financial reporting year. Includes federal securities, federal agency securities, state and political subdivision securities, and other securities such as bonds, notes and mortgages. For the purpose of this state or political subdivision financial test, the calculation of total funds shall exclude agency funds, private funds, private trust funds, accounts receivable, value of real property, and other non-security assets.

(vi) Population: consists of the number of people in the area served by the state or political subdivision.

(b) The state's or political subdivision's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The state or political subdivision cannot have outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

(c) The state or political subdivision owner or operator shall have a letter signed by the chief financial officer worded as specified in paragraph (T)(3) of this rule.

(3) To demonstrate that it meets the state or political subdivision financial test contained in this paragraph, the chief financial officer of the state or political subdivision owner or operator, shall sign, within one hundred twenty days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support this state or political subdivision financial test are prepared, a letter worded exactly as written in Appendix J, except that the instructions in the square brackets are to be replaced by the relevant information and the square brackets deleted.

(4) If the state or a political subdivision owner or operator using this state or political subdivision financial test to provide financial assurance finds that it no longer meets the requirements of the state or political subdivision financial test based on the year-end financial statements, the state or political subdivision owner or operator shall obtain alternative coverage within one hundred fifty days of the end of the year for which financial statements have been prepared.

(5) The state fire marshal may require reports of financial condition at any time from the state or political subdivision owner or operator. If the state fire marshal determines, on the basis of such reports or other information, that the state of a political subdivision owner or operator no longer

meets the state or political subdivision financial test requirements of this paragraph, the state or political subdivision owner or operator shall obtain alternative coverage within thirty days after notification of such finding.

(6) If the state or political subdivision owner or operator fails to obtain alternate assurance within one hundred fifty days of finding that it no longer meets the requirements of the state or political subdivision financial test based on the year-end financial statements or within thirty days of notification by the state fire marshal that it no longer meets the requirements of this state or political subdivision financial test, the state or political subdivision owner or operator shall notify the state fire marshal of such failure within ten days.

(U) Political subdivision guarantee.

(1) The political subdivision owner or operator may satisfy the requirements of paragraph (H) of this rule by obtaining a guarantee that conforms to the requirements of this paragraph. The guarantor must be either the state in which the political subdivision owner or operator is located or a political subdivision having a substantial governmental relationship with the political subdivision owner or operator and issuing the guarantee as an act incident to that relationship. A political subdivision acting as the guarantor must:

(a) Demonstrate that it meets the state or political subdivision bond rating tests requirements of paragraph (S) of this rule and deliver a copy of the applicable chief financial officer's letter as contained in paragraphs (S)(5) or (S)(6) of this rule to the political subdivision owner or operator; or

(b) Demonstrate that it meets the state or political subdivision financial test requirements of paragraph (T) of this rule and deliver a copy of the chief financial officer's letter as contained in paragraph (T)(3) of this rule to the political subdivision owner or operator; or

(c) Demonstrate that it meets the state or political subdivision fund requirements of paragraph (V) of this rule and deliver a copy of the chief financial officer's letter as contained in paragraph (V)(1)(d) of this rule to the political subdivision owner or operator.

(2) If the political subdivision guarantor is unable to demonstrate financial assurance under paragraphs (S), (T), or (V) of this rule, at the end of the financial reporting year, the political subdivision guarantor shall send by certified mail, before cancellation or non-renewal of the guarantee, notice to the political subdivision owner or operator. The guarantee will terminate no less than one hundred twenty days after the date the political subdivision owner or operator receives the notification, as evidenced by the return receipt. The political subdivision owner or operator shall obtain alternative coverage as specified in paragraph (CC)(3) of this rule.

(3) The guarantee agreement shall be worded as specified in paragraphs (U)(4)(a) and (U)(4)(b) or (U)(5)(a) and (U)(5)(b) of this rule, depending on which of the following alternative guarantee agreements is selected:

(a) If, in the default or incapacity of the political subdivision owner or operator, the guarantor guarantees to fund a standby trust as directed by the state fire marshal, the guarantee shall be worded as specified in paragraphs (U)(4)(a) or (U)(4)(b) of this rule; or

(b) If, in the default or incapacity of the political subdivision owner or operator, the guarantor guarantees to make payments as directed by the state fire marshal for taking corrective action

or compensating third parties for bodily injury and property damage, the guarantee shall be worded as specified in paragraphs (U)(5)(a) or (U)(5)(b) of this rule.

(4)

(a) If the guarantor is the state, the political subdivision guarantee with standby trust shall be worded exactly as written in Appendix K, except that the instructions in the square brackets are to be replaced with the relevant information and the square brackets deleted:

(b) If the guarantor is a political subdivision, the political subdivision guarantee with standby trust must be worded exactly as written in Appendix L, except that instructions in the square brackets are to be replaced with the relevant information and the square brackets deleted:

(5)

(a) If the guarantor is the state, the political subdivision guarantee without standby trust must be worded exactly as written in Appendix M, except that the instructions in the square brackets are to be replaced with the relevant information and the square brackets deleted:

(b) If the guarantor is a political subdivision, the political subdivision guarantee without standby trust must be worded exactly as written in Appendix N, except that instructions in the square brackets are to be replaced with the relevant information and the square brackets deleted:

(V) State or political subdivision fund

(1) The state or political subdivision owner or operator may satisfy the requirements of paragraph (H) of this rule by establishing a dedicated fund account that conforms to the requirements of this paragraph. Except as specified in paragraph (V)(2) of this rule, a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

(a) The fund is dedicated by state constitutional provision, or state or political subdivision statute, chapter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs and is funded for the amount of coverage required by paragraph (H)(1) of this rule; or

(b) The fund is dedicated by state constitutional provision, or state or political subdivision statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental release arising from the operation of petroleum USTs, and is funded for five times the amount of coverage required by paragraph (H)(1) of this rule; or

(c) The fund is dedicated by state constitutional provision, or state or political subdivision statute, charter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs. A payment is made to the fund once every year for seven years until this fund is fully funded. This seven year period is hereafter referred to as the "pay-in-period." The amount of each payment shall be determined by this formula:

[TF - CF]/Y

Where TF is the total required financial assurance for the state or political subdivision owner or operation, CF is the current amount in the fund, and Y is the number of years remaining in the pay-in-period, and;

(i) The state or political subdivision owner or operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs; or

(ii) The state or political subdivision owner or operation has a letter signed by the Ohio attorney general stating that the use of the bonding authority will not increase the state's or political subdivision's debt beyond the legal debt ceilings established by the applicable state laws. The letter must also state that prior voter approval is not necessary before use of the bonding authority.

(2) To demonstrate that it meets the requirements of the state or political subdivision fund, the chief financial officer of the state or political subdivision owner or operator, or the state or political subdivision serving as a guarantor shall sign a letter worded exactly as written in Appendix O, except that the instructions in the square brackets are to be replaced by the relevant information and the square brackets deleted:

(W) Substitution of financial assurance mechanisms by owner or operator.

(1) An owner or operator may substitute any alternate financial assurance mechanism described in paragraphs (L) to (V) of this rule as specified in this paragraph, provided that at all times he or she maintains an effective financial assurance mechanism that satisfies the requirements of paragraphs (H) and (J) of this rule.

(2) After obtaining alternate financial assurance as specified in paragraph (W)(1) of this rule, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

(X) Cancellation or nonrenewal by a provider of financial assurance.

(1) Except as otherwise provided in this paragraph, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

(a) Termination of a political subdivision guarantee, guarantee, a surety bond, or a letter of credit shall not occur until one hundred twenty days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(b) Termination of insurance, risk retention group coverage, or the fund coverage except for non-payment or misrepresentation by the insured, shall not occur until sixty days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or fee or misrepresentation by the insured shall not occur until a minimum of ten days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) If a provider of financial responsibility cancels or fails to renew for reasons other than non-payment of premium or fee or misrepresentation by the insured, or the incapacity of the provider as specified in paragraph (Y)(1)(b) of this rule, the owner and operator shall obtain alternate coverage as specified in this rule within sixty days after receipt of the notice of termination. If the owner and operator fail to obtain alternate coverage within sixty days after receipt of the notice of termination, the owner and operator shall immediately notify the state fire marshal of such failure and submit:

(a) The name and address of the provider of financial assurance;

(b) The effective date of termination; and

(c) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with paragraphs paragraph (Z)(2) of this rule.

(Y) Reporting by owner and operator.

(1) Owners and operators shall submit the appropriate forms listed in paragraph (Z)(2) of this rule documenting current evidence of financial responsibility to the state fire marshal:

(a) Within thirty days after the owner or operator identifies a release from a UST required to be reported under section 3737.88 or 3737.882 of the Revised Code or this chapter of the Administrative Code.

(b) If the owner and operator fail to obtain alternate coverage as required by this rule, within thirty days after the owner or operator receives notice of:

(i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U. S. Code, naming a provider of financial assurance as a debtor; or

(ii) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism; or

(iii) Failure of a guarantor to meet the requirements of the financial test; or

(iv) Other incapacity of a provider of financial assurance.

(c) As required by paragraphs (L)(8), (X)(2), and (CC)(5) of this rule.

(2) Owners and operators shall certify compliance with the financial responsibility requirements of this rule when notifying the state fire marshal of the installation of a new UST under paragraph (C) of rule 1301:7-9-04 of the Administrative Code.

(3) The state fire marshal may require an owner or operator to submit evidence of financial assurance as described in paragraph (Z)(2) of this rule or other information relevant to compliance with this rule at any time.

(Z) Recordkeeping.

(1) Owners and operators shall maintain copies of all financial assurance mechanisms and related documents used to demonstrate financial responsibility under this rule for a UST until released

from the requirements of this rule under paragraph (BB) of this rule. Owners and operators shall maintain such evidence at the UST site or the owner's or operator's place of business. Records maintained off-site shall be made available within twenty-four hours upon request of the state fire marshal.

(2) Owners and operators shall maintain the following types of evidence of financial responsibility:

(a) Owners and operators using an assurance mechanism specified in paragraphs (L) to (V) of this rule shall maintain a copy of the instrument worded as specified.

(b) Owners and operators using a financial test, or a state or political subdivision financial test or a political subdivision guarantee supported by the state or political subdivision financial test shall maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year and, if applicable, a copy of the special report prepared by an independent certified public accountant. Such evidence shall be on file no later than one hundred twenty days after the close of the financial reporting year.

(c) Owners and operators using a guarantee, surety bond, or letter of credit shall maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(d) A political subdivision owner or operator using a political subdivision guarantee under paragraphs (U)(4)(a) or (U)(4)(b) of this rule shall maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(e) A state or political subdivision owner or operator using the state or political subdivision bond rating test under paragraph (S) of this rule shall maintain a copy of its bond rating published within the last twelve months by Moody's or Standard & Poor's.

(f) A political subdivision owner or operator using the political subdivision guarantee under paragraph (U) of this rule, where the guarantor's demonstration of financial responsibility relies on the state or political subdivision bond rating test under paragraph (S) of this rule shall maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard & Poor's.

(g) Owners and operators using an insurance policy or risk retention group coverage shall maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

(h) Owners and operators shall maintain on file a copy of the current certificate of coverage under the fund.

(i) A state of political subdivision owner or operator using a state or political subdivision fund under paragraph (V) of this rule shall maintain the following documents:

(i) A copy of the state constitutional provision or state or political subdivision statute, charter, ordinance, or order dedicating the fund, and

(ii) Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under paragraph (V)(3) of this rule using incremental funding backed by bonding authority, the financial statements shall

show the previous year's balance, the amount of funding during the year, and the closing balance in the fund.

(iii) If the fund is established under paragraph (V)(3) of this rule using incremental funding backed by bonding authority, the state or political subdivision owner or operator shall also maintain documentation of the required bonding authority, including either the results of the voter referendum (under paragraph (V)(3)(a) of this rule), or attestation by the Ohio attorney general as specified under paragraph (V)(3)(b) of this rule.

(j) A political subdivision owner or operator using the political subdivision guarantee supported by the state or political subdivision fund shall maintain a copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund.

(k) An owner or operator using an assurance mechanism specified in paragraphs (L) to (V) of this rule shall maintain an updated copy of a certification of financial responsibility worded as written in Appendix P, except that instructions in the square brackets are to be replaced with the relevant information and the square brackets deleted.

Owners and operators shall update this certification whenever the financial assurance mechanism used to demonstrate financial responsibility changes.

(AA) Drawing on financial assurance mechanisms.

(1) Except as specified in paragraph (AA)(4) of this rule, upon direction from the state fire marshal, the guarantor, surety, or institution issuing a letter of credit shall place the amount of funds stipulated by the state fire marshal, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

(a)

(i) The owner and operator fail to establish alternate financial assurance within sixty days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The state fire marshal determines or suspects that a release from a UST covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the state fire marshal pursuant to section 3737.88 or 3737.882 of the Revised Code or this chapter of the Administrative Code of a confirmed or suspected release from a UST covered by the mechanism; or

(b) Any of the conditions contained in paragraph (AA)(2) of this rule are satisfied.

(2) The state fire marshal may draw on a standby trust fund or trust fund when:

(a) The state fire marshal makes a final determination that a release is suspected or has occurred and corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code; or

(b) The state fire marshal has received either:

(i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in square brackets are to be replaced with the relevant information and the square brackets deleted:

"Certification of Valid Claim

The undersigned, as principals and as legal representatives of [insert: name of the owner or operator] and [insert: name and address of third-party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of [insert: the appropriate dollar amount in words] dollars.

[Signatures]

Owner or Operator

Attorney for Owner or Operator

(Notary) Date

[Signature(s)]

Claimant(s)

Attorney(s) for Claimant(s)

(Notary) Date";

or

(ii) a valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from a UST covered by financial assurance under this rule and the state fire marshal determines that the owner or operator has not satisfied the judgment.

(3) If the state fire marshal determines that the amount of corrective action costs and third-party liability claims eligible for payment under paragraph (AA)(2) of this rule may exceed the balance of the trust fund or the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The state fire marshal shall pay third-party liability claims in the order in which the state fire marshal receives certification under paragraph (AA)(2)(b)(i) of this rule, and valid court orders under paragraph (AA)(2)(b)(ii) of this rule.

(4) A state or political subdivision acting as a guarantor under paragraphs (U)(5)(a) to (U)(5)(b) of this rule, shall make payments as directed by the state fire marshal under the circumstances set forth in paragraphs (AA)(1) to (AA)(3) of this rule.

(BB) Release from the requirements.

Owners and operators are no longer required to maintain financial responsibility under this rule for a petroleum UST system after the UST system has been properly closed as required by this chapter of the Administrative Code or, if corrective action is required, after corrective action has been completed in compliance with sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code and the petroleum UST system has been properly closed as required by this chapter of the Administrative Code.

(CC) Bankruptcy or other incapacity of owner or operator or provider of financial assurance and non-payment of premium or fee or misrepresentation by the insured.

(1) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator shall notify the state fire marshal by certified mail of such commencement and submit the appropriate forms listed in paragraph (Z)(2) of this rule documenting current financial responsibility.

(2) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U. S. Code, naming a guarantor providing financial assurance as debtor, such guarantor shall notify the owner and operator by certified mail of such commencement as required under the terms of the guarantee specified in paragraph (M)(4) of this rule.

(3) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a state or political subdivision owner or operator as debtor, the state or political subdivision owner or operator shall notify the state fire marshal by certified mail of such commencement and submit the appropriate forms listed in paragraph (Z)(2) of this rule documenting current financial responsibility.

(4) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a state or political subdivision financial assurance as debtor, such guarantor shall notify the state or political subdivision owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in paragraphs (U)(4)(a) to (U)(5)(b) of this rule.

(5) Owners and operators who obtain financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or a certificate of coverage under the fund established in section 3737.91 of the Revised Code. The owner and operator shall obtain alternate financial assurance as specified in this rule within thirty days after receiving notice of such an event. If the owner and operator do not obtain alternate coverage within thirty days after such notification, they shall notify the state fire marshal of such failure.

(6) Within thirty days after receipt of notification that the fund has become incapable of paying for assured corrective action or third-party compensation costs, the owner and operator shall obtain alternate financial assurance.

(7) Within ten days after receipt of notification of termination of insurance, risk retention group coverage, or the fund coverage because of non-payment of premium or fee or misrepresentation by the insured, the owner and operator shall obtain alternate financial assurance.

(DD) Replenishment of financial assurance mechanisms.

(1) If at any time a standby trust is funded upon the instruction of the state fire marshal with funds drawn from a guarantee, political subdivision guarantee with standby trust, letter of credit, or surety bond, the owner and operator shall within thirty days of being so notified by the state fire marshal:

(a) Replenish the value of financial assurance to equal the full amount of coverage required, or

(b) Acquire another financial assurance mechanism described in paragraphs (L) to (V) of this rule for an amount equal to the full amount of coverage required.

(2) For purposes of this paragraph, the full amount of coverage required is the amount of coverage to be provided by paragraphs (H) and (J) of this rule.

(3) If at any time during the policy period the amount of aggregate remaining under an insurance or risk retention group policy is reduced below either the reduced fund deductible or fund deductible, whichever is applicable, the owner and operator shall within thirty days of being so notified by the state fire marshal:

(a) Replenish the value of financial assurance to equal the applicable policy period aggregate under paragraph (J)(2) of this rule, or

(b) Acquire another financial assurance mechanism described in paragraphs (L) to (V) of this rule for an amount equal to the full amount of coverage required.

(4) If at any time a trust agreement balance established pursuant to paragraph (Q) of this rule is reduced below the full amount of coverage required, the owner and operator shall within thirty days of being so notified by the state fire marshal:

(a) Replenish the value of the trust agreement to equal the full amount of coverage required, or

(b) Acquire another financial assurance mechanism described in paragraphs (L) to (P) of this rule for an amount equal to the full amount of coverage required.

APPENDIX A

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the financial test of self-insurance to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code] per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test by this [insert: "owner" or "operator,"]: [list for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms are being used to assure any of the tanks at this facility, describe each tank assured by this financial test.]

A [insert: "financial test " and/or "guarantee"] is also used by this [insert: "owner" or "operator"] to demonstrate evidence of financial responsibility in the following amounts under United States environmental protection agency regulations or state programs authorized by the United States environmental protection agency under 40 C. F. R. Parts 281, 271, and 145:

--

Appropriate aggregate amount required for USTs in other states by the United States Environmental Protection Agency under 40 C.F.R. 280.93;	$_____
Appropriate aggregate amount required for USTs in other states by another state implementing program authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 281;	$_____
Closure amounts required by the United States Environmental Protection Agency under 40 C.F.R. 264.143 and 265.143;	$_____
Post-closure care amounts required by the United States Environmental Protection Agency under 40 C.F.R. 264.145 and 265.145;	$_____
Liability coverage amounts required by the United States Environmental Protection Agency under 40 C.F.R. 264.147 and 265.147;	$_____
Corrective action amounts required by the United States Environmental Protection Agency under 40 C.F.R. 264.101 (B);.	$_____
Plugging and abandonment amounts required by the United States Environmental Protection Agency under 40 C.F.R. 144.63;	$_____
Closure amounts required by all state implementing agencies under state programs authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 271;	$_____
Post-closure care amounts required by all state implementing agencies under state programs authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 271;	$_____
Liability coverage amounts required by all state implementing agencies under state programs authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 271;	$_____

Corrective action amounts required by all state implementing agencies under state programs authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 271;	$_____
Plugging and abandonment amounts required by all state implementing agencies under state programs authorized by the United States Environmental Protection Agency under 40 C.F.R. Part 145	$_____
Total	$_____

This [insert: "owner" or "operator,"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the applicable information below.]

--

1.	Amount of annual UST aggregate coverage being assured in Ohio by a financial test	$_____
2.	Amount of corrective action, closure and post-closure care costs, liability coverage, plugging and abandonment costs, and UST financial responsibility liabilities in all other states	$_____
3.	Sum of lines 1 and 2	$_____
4.	Total tangible assets	$_____
5.	Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]	$_____
6.	Tangible net worth [subtract line 5 from line 4].	$_____

--

		Yes	No
7.	Is line 6 at least ten times line 3?	_____	_____
8.	Have financial statements for the latest fiscal year been filed with the United States securities and exchange commission?.	_____	_____
9.	Have financial statements for the latest fiscal year been filed with the United States energy information administration?	_____	_____
10.	Have financial statements for the latest fiscal year been filed with the United States rural utilities service?	_____	_____
11.	Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "yes" only if both criteria have been met.].	_____	_____
12.	Have financial statements for the latest fiscal year been filed with the Ohio department of commerce?.	_____	_____

[If lines 8 through 12 are all answered "no", please attach the report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4 through 7 above and the financial statements for the latest fiscal year.]

[Complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in Appendix A of rule 1301:7-9-05 of the Ohio Administrative Code as such regulation was constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

APPENDIX B

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], and in compliance with all applicable sections of Title 39 of the Ohio Revised Code, herein referred to as Guarantor, to the Ohio State Fire Marshal and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

(1) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, describe the tanks covered and list the name and address of the facility.] This guarantee satisfies rule 1301:7-9-05 of the Ohio Administrative Code requirements for assuring funding for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases from the above-identified underground storage tank(s) in the amount of [insert applicable dollar amount required under paragraph (H)(1) of this rule] per occurrence and [insert applicable dollar amount required under paragraph (J)(3) of this rule] annual aggregate.

(2) On behalf of [owner or operator], Guarantor guarantees to the Ohio State Fire Marshal and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the Ohio State Fire Marshal has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the Guarantor, upon instructions from the Ohio State Fire Marshal, shall fund a standby trust fund in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

In the event that the Ohio State Fire Marshal determines that [owner or operator] has failed to perform corrective action for releases from the above-identified tank(s) in accordance with section 3737.88 or 3737.882 of the Ohio Revised Code or Chapter 1301:7-9 of the Ohio Administrative Code, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases from the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(3) Guarantor agrees that if, at any time, the Guarantor fails to meet any of the applicable sections of Title 39 of the Ohio Revised Code, Guarantor shall send within one hundred twenty days of such failure, by

certified mail, notice to [owner or operator]. The guarantee will terminate one hundred twenty days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming Guarantor as debtor, within ten days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to Chapter 1301:7-9 of the Ohio Administrative Code.)

(6) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of rule 1301:7-9-05 of the Ohio Administrative Code for the above-identified tank(s), except that Guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(7) The Guarantor's obligation does not apply to any of the following:

(a) any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Ohio State Fire Marshal, by any or all third parties, or by [owner or operator].

I hereby certify that [name of Guarantor] is in compliance with all applicable sections of Title 39 of the Ohio Revised Code.

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix B of rule 1301:7-9-05 of the Ohio Administrative Code as such regulation was constituted on the date shown immediately below.

Effective date:

_____

[Name of Guarantor].

[Authorized signature for Guarantor].

[Name of person signing].

[Title of person signing].

Signature of witness or notary:

APPENDIX C

ENDORSEMENT AND CERTIFICATE OF INSURANCE

Endorsement.

Name: [name of each covered location].

_____

_____

Address: [address of each covered location].

_____

_____

_____

Policy number: _____

Period of Coverage: [current policy period].

_____

_____

Name of [Insurer or Risk Retention Group]:

_____

_____

Address of [Insurer or Risk Retention Group]:

_____

_____

Name of Insured:

_____

Address of Insured:

_____

_____

_____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, describe the tanks covered and list the name and address of the facility.]

For taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the applicable dollar amount from paragraph (H)(1) of this rule] per-occurrence and [insert applicable dollar amounts from paragraph (J)(2) of this rule] aggregate [if the amount of coverage is different for different underground storage tanks or locations, indicate the amount of coverage for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (A) through (E) of this Paragraph 2 are hereby amended to conform with subsections (A) through (E);

A. Bankruptcy or insolvency of the Insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.

B. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the Insured for any such payment made by the ["Insurer" or "Group"].

C. Whenever requested by the Ohio State Fire Marshal, the ["Insurer" or "Group"] agrees to furnish to the Ohio State Fire Marshal a signed duplicate original of the policy and all endorsements. The ["Insurer" or "Group"] agrees to furnish to the Ohio State Fire Marshal copies of all payments made under this policy within ten days of making payment.

D. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the Insured, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the Insured. Cancellation for non-payment of premium or misrepresentation by the Insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the Insured.

E. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of the cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in Appendix C of rule 1301:7-9-05 of the Ohio Administrative Code and that the ["Insurer" or "Group"] is in compliance with all applicable sections of Title 39 of the Ohio Revised Code.

[Signature of authorized representative of Insurer or Risk Retention Group].

[Name of person signing].

[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group].

[Address of representative].

Certificate of Insurance.

Name: [name of each covered location].

_____

_____

Address: [address of each covered location].

_____

_____

_____

_____

Policy number: _____

Endorsement (if applicable):

_____

Period of Coverage: [current policy period].

_____

Name of [Insurer or Risk Retention Group]:

_____

_____

Address of [Insurer or Risk Retention Group]:

_____

_____

_____

Name of Insured:

_____

Address of Insured:

_____

_____

_____

Certification:

1. [Name of Insurer of Risk Retention Group], [the "Insurer" or "Group"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, describe the tank covered and list the name and address of the facility.]

For taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases, in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy, arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert applicable dollar amount from paragraph (H)(1) of this rule] per-occurrence and [insert applicable dollar amount from paragraph (J)(2) of this rule] annual aggregate [if the amount of coverage is different for different underground storage tanks or locations, indicate the amount of coverage for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date]. 2. The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph 1:

A. Bankruptcy or insolvency of the Insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this certificate applies.

B. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the Insured for any such payment made by the ["Insurer" or "Group"].

C. Whenever requested by the Ohio State Fire Marshal, the ["Insurer" or "Group"] agrees to furnish to the Ohio State Fire Marshal a signed duplicate original of the policy and all endorsements. The ["Insurer" or "Group"] agrees to furnish to the Ohio State Fire Marshal copies of all payments made under this policy within ten days of making payment.

D. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the Insured, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the Insured. Cancellation for non-payment of premium or misrepresentation by the Insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the Insured.

E. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in Appendix C of rule 1301:7-9-05 of the Ohio Administrative Code and that the ["Insurer" or "Group"] is in compliance with all applicable sections of Title 39 of the Ohio Revised Code.

[Signature of authorized representative of Insurer].

[Type name].

[Title], Authorized Representative of [name of Insurer or Risk Retention Group].

[Address of Representative]

APPENDIX D

PERFORMANCE BOND

Date bond executed: _____

Period of coverage: _____

Principal: [legal name and business address of owner or operator].

Type of organization: [insert individual, joint venture, partnership, or corporation].

State of incorporation (if applicable): _____

Surety(ies): [name(s) and business address(es)].

Scope of Coverage: [list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, describe the tanks covered and list the name and address of the facility. List the coverage guaranteed by the bond as "taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from operating the underground storage tank"].

Penal sums of bond:

Per occurrence: [insert applicable dollar amounts required under paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code].

Annual aggregate: [insert applicable dollar amounts required under paragraph (J)(3) of rule 1301:7-9-05 of the Ohio Administrative Code].

Surety's bond number:

_____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to the Ohio State Fire Marshal, in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under paragraphs (H) of rule 1301:7-9-05 of the Ohio Administrative Code to provide financial assurance for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required by paragraph (O)(4) of rule 1301:7-9-05 of the Ohio Administrative Code when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully take corrective action, in accordance with sections 3737.88 and 3737.882 of the Ohio Revised Code and Chapter 1301:7-9 of the Ohio Administrative Code and the Ohio State Fire Marshal's instructions and compensate injured third parties for bodily injury and property damage caused by accidental releases arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in paragraphs (X) of rule 1301:7-9-05 of the Ohio Administrative Code, within one hundred twenty days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

(A) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(B) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(C) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(D) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(E) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Ohio State Fire Marshal that the Principal has failed to take corrective action, in accordance with sections 3737.88 and 3737.882 of the Ohio Revised Code and Chapter 1301:7-9 of the Ohio Administrative Code and the Ohio State Fire Marshal's instructions, or compensate injured third parties as guaranteed by this bond, the Surety(ies) shall either perform corrective action in accordance with sections 3737.88 and 3737.882 of the Ohio Revised Code and Chapter 1301:7-9 of the Ohio Administrative Code and the Ohio State Fire Marshal's instructions and pay third-party liability compensation or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the Ohio State Fire Marshal under paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code. The surety(ies) shall notify the Ohio State Fire Marshal of all payments made under this instrument within ten days of making payment.

Upon notification by the Ohio State Fire Marshal that the Principal has failed to provide alternate financial assurance within sixty days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that the Ohio State Fire Marshal has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum

into the standby trust fund as directed by the Ohio State Fire Marshal under paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code.

The surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Thereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Appendix D of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date this bond was executed. The persons whose signatures appear below hereby certify that the Surety(ies) are in compliance with all applicable sections of Title 39 of the Ohio Revised Code.

Principal

[Signature(s)].

[Name(s)].

[Title(s)].

[Corporate seal].

Corporate Surety(ies)

[Name and address].

State of Incorporation: [_____.]

Liability limit: [$_____.]

[Signature(s)].

[Name(s) and title(s)].

[Corporate seal].

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: $_____

APPENDIX E

IRREVOCABLE STANDBY LETTER OF CREDIT

[Name and address of issuing institution].

[Name and address of the Ohio State Fire Marshal].

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words of an amount equal to the per-occurrence amount required under paragraphs (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code] U.S. dollars ($[insert dollar amount]), available upon presentation by you of

(1) Your signed draft, bearing reference to this letter of credit, No. _____, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of section 3737.882 of the Ohio Revised Code."

This letter of credit may be drawn on to cover taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases from the underground storage tank(s) identified below in the amount of [in words of an amount equal to the per-occurrence amount required under paragraphs (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code.] $[insert dollar amount] per occurrence and [in words of an amount equal to the per-occurrence amount required under paragraphs (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code] $[insert dollar amount] annual aggregate:

[list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, describe the tanks covered and list the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

(A) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(B) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(C) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(D) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(E) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraphs (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty days after the date of receipt by [owner or operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Appendix E of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[date]

This credit is subject to [insert: "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," OR "the Uniform Commercial Code", or the applicable state statute].

APPENDIX F

TRUST AGREEMENT

Trust agreement, the "Agreement", entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert corporation, partnership, association, or proprietorship], the Grantor, and [name of corporate trustee], [insert "incorporated in the state of _____" or a "national bank":], the Trustee.

Whereas, the State Fire Marshal, a division of the state of Ohio, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases from underground storage tanks. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by this trust agreement.

[Whereas, the Grantor has elected to establish [insert either "a guarantee", "surety bond", or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (this paragraph is only applicable to the standby trust agreement.)];

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions.

As used in this Agreement:

(A) the term "Grantor" means the owner or operator who enters into this Agreement and any successor or assigns of the Grantor.

(B) the term "Trustee" means the Trustee who enters into this Agreement and any successor trustee.

Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (this paragraph is only applicable to the standby trust agreement.)].

Section 3. Establishment of Fund.

[The following paragraph is only applicable to the standby trust fund.]

The Grantor and Trustee hereby establish a standby trust fund, the "Fund", for the benefit of the Ohio State Fire Marshal. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as a standby to receive payments and shall not consist of any property. Payments made by the provider of financial assurance pursuant to the Ohio State Fire

Marshal's instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, in trust, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by the Ohio State Fire Marshal.

[The following paragraph is only applicable to the trust fund.]

The Grantor and Trustee hereby establish a trust fund, the "Fund", for the benefit of the Ohio State Fire Marshal. The Fund shall at all times have a minimum value of [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code.] The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund shall be held by the Trustee, in trust, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liability of the Grantor established by the Ohio State Fire Marshal.

Section 4. Payment for Corrective Action and Third-party Liability Claims.

The Trustee shall make payments from the Fund as the Ohio State Fire Marshal shall direct, in writing, to provide for the payment of the costs of taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases from the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

(A) Any obligation of [insert owner or operator] under a worker's compensation, disability benefits, or unemployment compensation law or other similar law;

(B) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];

(C) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(D) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or

(E) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

The Trustee shall reimburse the Grantor, or other persons as specified by the Ohio State Fire Marshal, from the Fund for corrective action expenditures and third-party liability claims in such amounts as the Ohio State Fire Marshal shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Ohio State Fire Marshal specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund.

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management.

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(I) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(II) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(III) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment.

The Trustee is expressly authorized in its discretion:

(A) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(B) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee.

Without in any way limiting the powers and discretions conferred upon the Trustee by other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(A) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(B) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(C) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for

the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(D) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government;

(E) To compromise or otherwise adjust all claims in favor of or against the Fund; and

(F) To distribute income of the Fund to the Grantor, but only to an extent which assures that the Fund retains a minimum value equal to [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code.]

Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel.

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation.

The Trustee shall be entitled to reasonable compensation for its services as set forth in the attached Schedule B and as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee.

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund and shall provide the Grantor and successor trustee with a final accounting of the Fund within thirty days. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule C or such other designees as the Grantor may designate by amendment to Schedule C. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Ohio State Fire Marshal to the Trustee shall be in writing, signed by the Ohio Fire State Marshal, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Ohio State Fire Marshal hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Ohio State Fire Marshal, except as provided for herein.

Section 14. Amendment of Agreement.

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and the Ohio State Fire Marshal if the Grantor ceases to exist.

Section 15. Irrevocability and Termination.

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and the Ohio State Fire Marshal if the Grantor ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification.

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Ohio State Fire Marshal issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law.

This Agreement shall be administered, construed, and enforced according to the laws of the state of [insert name of state], or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation.

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Appendix F of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date written above.

[Signature of Grantor].

[Name of the Grantor].

[Title].

Attest:

[Signature of Trustee].

[Name of the Trustee].

[Title].

[Seal].

[Signature of Witness].

[Name of the Witness].

[Title].

[Seal]

APPENDIX G

CERTIFICATE OF ACKNOWLEDGEMENT

"State of [insert: name of state] _____

State of [insert: name of county] _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

[Printed Name of Notary Public]"

APPENDIX H

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the state or political subdivision owner or operator, or the state or a political subdivision serving as a guarantor]. This letter is in support of the bond rating test to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: The name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [insert: name of state or political subdivision owner or operator, or the state or a political subdivision serving as a guarantor] to demonstrate financial responsibility are as follows: [complete table]

--

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency [Moody's or Standard & Poor's]

The total outstanding obligation of [insert: the total of the Outstanding Amount column in words] dollars, excluding refunded bond issues, exceeds the minimum amount of one million dollars. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last twelve months. Neither rating service has provided notification within the last twelve months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in Appendix H of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date shown immediately below.

[Insert: Date]

[Signature of the Chief Financial Officer]

[Insert: The Printed Name of the Chief Financial Officer]

[Insert: Official Title of the Chief Financial Officer]

APPENDIX I

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the political subdivision owner or operator, or the political subdivision serving as a guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating (an) underground storage tank(s). This political subdivision is not organized to provide general governmental services and does not have the legal authority under Ohio law or the Ohio constitution to issue general obligation debt.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [insert: name of political subdivision owner or operator, or the political subdivision serving as a guarantor] to demonstrate financial responsibility are as follows: [complete table]

--

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency [Moody's or Standard & Poor's]

The total outstanding obligation of [insert: the total of the Outstanding Amount column in words] dollars, excluding refunded bond issues, exceeds the minimum amount of one million dollars. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last twelve months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last twelve months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in Appendix I of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date shown immediately below.

[Insert: Date]

[Signature of the Chief Financial Officer]

[Insert: The Printed Name of the Chief Financial Officer]

[Insert: Official Title of the Chief Financial Officer]

APPENDIX J

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the state or political subdivision owner or operator]. This letter is in support of the use of the state or political subdivision financial test to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test: [List for each facility: The name and address of the facility where tanks assured by this state of political subdivision financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this state or political subdivision financial test by the tank identification number required in the annual registration application required by paragraphs (B) to (B)(3) of rule 1301:7-9-04 of the Ohio Administrative Code].

This owner or operator has not received in adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A or Baa or a Standard & Poor's rating of AAA, AA, A or BBB; if rated by both firms, the bonds have a Moody's rating of Aaa, Aa, A or Baa and a Standard & Poor's rating of AAA, AA, A or BBB.

Worksheet for State or Political Subdivision Financial Test.

Part I: Basic Information

1. Total Revenues

a. Revenues (dollars) _____

Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds, including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.

b. Subtract interfund transfers (dollars) _____

c. Total revenues (dollars) _____

2. Total Expenditures

a. Expenditures (dollars) _____

Value consists of the sum of general operating and nonoperating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.

b. Subtract interfund transfers (dollars) _____

c. Total expenditures (dollars) _____

3. Local Revenues

a. Total Revenues (from 1) (dollars) _____

b. Subtract total intergovernmental transfers (dollars)_____

c. Local Revenues (dollars) _____

4. Debt Service

a. Interest and fiscal charges (dollars) _____

b. Add debt retirement (dollars) _____

c. Total Debt Service (dollars) _____

5. Total Funds (dollars) _____

(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)

6. Population (Persons) _____

Part II: Application of Test

7. Total Revenues to Population

a. Total Revenues (from 1c) _____

b. Population (from 6) _____

c. Divide 7a by 7b _____

d. Subtract 417 _____

e. Divide by 5,212 _____

f. Multiply by 4.095 _____

8. Total Expenses to Population

a. Total Expenses (from 2c) _____

b. Population (from 6) _____

c. Divide 8a by 8b _____

d. Subtract 524 _____

e. Divide by 5,401 _____

f. Multiply by 4.095 _____

9. Local Revenues to Total Revenues

a. Local Revenues (from 3c) _____

b. Total Revenues (from 1c) _____

c. Divide 9a by 9b _____

d. Subtract .695 _____

e. Divide by .205 _____

f. Multiply by 2.840 _____

10. Debt Service to Population

a. Debt Service (from 4d) _____

b. Population (from 6) _____

c. Divide 10a by 10b _____

d. Subtract 51 _____

e. Divide by 1,038 _____

f. Multiply by -1.866 _____

11. Debt Service to Total Revenues

a. Debt Service (from 4d) _____

b. Total Revenues from (1c) _____

c. Divide 11a by 11b _____

d. Subtract .068 _____

e. Divide by .259 _____

f. Multiply by -3.533 _____

12. Total Revenues to Total Expenses

a. Total Revenues (from 1c) _____

b. Total Expenses (from 2c) _____

c. Divide 12a by 12b _____

d. Subtract .910 _____

e. Divide by .899 _____

f. Multiply by 3.458 _____

13. Funds Balance to total revenues

a. Total Funds (from 5) _____

b. Total Revenues (from 1c) _____

c. Divide 13a by 13b _____

d. Subtract .891 _____

e. Divide by 9.156 _____

f. Multiply by 3.270 _____

14. Funds Balance of Total Expenses

a. Total Funds (from 5) _____

b. Total Expenses (from 2c) _____

c. Divide 14a by 14b _____

d. Subtract .866 _____

e. Divide by 6.409 _____

f. Multiply by 3.270 _____

15. Total Funds to Population

a. Total Funds (from 5) _____

b. Population (from 6) _____

c. Divide 15a by 15b _____

d. Subtract 270 _____

e. Divide by 4,548 _____

f. Multiply by 1.866 _____

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937_____

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in Appendix J of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date shown immediately below.

[Date]

[Signature of Chief Financial Officer]

[Printed Name of Chief Financial Officer]

[Official Title of Chief Financial Officer]

APPENDIX K

POLITICAL SUBDIVISION GUARANTEE WITH STANDBY TRUST MADE BY THE STATE

Guarantee made this [insert: date] by the State of Ohio, herein referred to as Guarantor, to the Ohio State Fire Marshal and to any and all third parties, and obliges, on behalf of [insert: name of the political subdivision owner or operator].

Recitals

(1) Guarantor is the State of Ohio

(2) [Insert: Name of political subdivision owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number required in the annual registration application required by paragraph (B) of rule 1301:7-9-04 of the Ohio Administrative Code, and the name and address of the facility.] This guarantee satisfies the requirements of rule 1301:7-9-05 of the Ohio Administrative Code for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating the above-identified underground storage tank(s).

(3) Guarantor guarantees to the Ohio State Fire Marshal and to any and all third parties that:

In the event that [insert: name of political subdivision owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the Ohio State Fire Marshal has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the Guarantor, upon instructions from the Ohio State Fire Marshal shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

In the event that the Ohio State Fire Marshal determines that [insert: name of the political subdivision owner or operator] has failed to perform corrective action for releases arising out of the operation of the above - identified tank(s) in accordance with the requirements of rule 1301:7-9-13 of the Ohio Administrative Code, the Guarantor upon written instructions from the Ohio State Fire Marshal shall fund a standby trust fund in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

If [insert: name of the political subdivision owner or operator] fails to satisfy a judgement or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code to satisfy such judgement(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [insert: name of the political subdivision owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming Guarantor as debtor, within ten days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [insert: name of the political subdivision owner or operator] pursuant to Chapter 1301:7-9 of the Ohio Administrative Code.

(6) Guarantor agrees to remain bound under this guarantee for so long as [insert: name of the political subdivision owner or operator] must comply with the applicable financial responsibility requirements of rule 1301:7-9-05 of the Ohio Administrative Code for the above-identified tank(s), except that Guarantor may cancel this guarantee by sending notice by certified mail to [insert: name of the political subdivision owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [insert: name of the political subdivision owner or operator], as evidenced by the return receipt.

(7) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert: name of the political subdivision owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: name of the political subdivision owner or operator] arising from, and in the course of, employment by [insert: name of the political subdivision owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: name of the political subdivision owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: name of the political subdivision owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Ohio State Fire Marshal, by any or all third parties, or by [insert: name of the political subdivision owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix K of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

State of Ohio.

[Authorized signature for Guarantor].

[Printed Name of Person Signing for the Guarantor].

[Official Title of Person Signing for the Guarantor].

Signature of witness or notary: _____

APPENDIX L

POLITICAL SUBDIVISION GUARANTEE WITH STANDBY TRUST MADE BY A POLITICAL SUBDIVISION

Guarantee made this [insert: date] by [insert: name of the political subdivision that is the guaranteeing entity], a political subdivision organized under the laws of the State of Ohio, herein referred to as Guarantor, to the Ohio State Fire Marshal and to any and all third parties, and obliges, on behalf of [insert: name of the political subdivision owner or operator].

Recitals

(1) Guarantor meets or exceeds [insert: "The state or political subdivision bond rating test requirements of paragraph (S) of rule 1301:7-9-05 of the Ohio Administrative Code." Or "the state or political subdivision financial test requirements of paragraphs (T) of rule 1301:7-9-05 of the Ohio Administrative Code." or "the state or political subdivision fund requirements of paragraph (V) of rule 1301:7-9-05 of the Ohio Administrative Code."]

(2) [Insert: Name of the political subdivision owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number required in the annual registration application required by paragraph (B) of rule 1301:7-9-04 of the Ohio Administrative Code and the name and address of the facility.] This guarantee satisfies the requirements of rule 1301:7-9-05 of the Ohio Administrative Code for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating the above-identified underground storage tank(s).

(3) Incidental to our substantial governmental relationship with [insert: name of the political subdivision owner or operator], Guarantor guarantees to the Ohio State Fire Marshal and to any and all third parties that:

In the event that [insert: name of political subdivision owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the Ohio State Fire Marshal has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the Guarantor, upon instructions from the Ohio State Fire Marshal shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

In the event that the Ohio State Fire Marshal determines that [insert: name of the political subdivision owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with the requirements of rule 1301:7-9-13 of the Ohio Administrative Code, the Guarantor upon written instructions from the Ohio State Fire Marshal shall fund a standby trust fund in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, in an amount not to exceed the coverage limits specified above.

If [insert: name of the political subdivision owner or operator] fails to satisfy a judgement or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall fund a standby trust in accordance with the provisions of paragraphs (AA)(1) to (AA)(3) of rule 1301:7-9-05 of the Ohio Administrative Code to satisfy such judgement(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the Guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), Guarantor shall send within one hundred twenty days of such failure, by certified mail, notice to [insert: name of the political subdivision owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [insert: name of the political subdivision owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming Guarantor as debtor, within ten days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [insert: name of the political subdivision owner or operator] pursuant to Chapter 1301:7-9 of the Ohio Administrative Code.

(7) Guarantor agrees to remain bound under this guarantee for so long as [insert: name of the political subdivision owner or operator] must comply with the applicable financial responsibility requirements of rule 1301:7-9-05 of the Ohio Administrative Code for the above-identified tank(s), except that Guarantor may cancel this guarantee by sending notice by certified mail to [insert: name of the political subdivision owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [insert: name of the political subdivision owner or operator], as evidenced by the return receipt.

(8) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert: name of the political subdivision owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: name of the political subdivision owner or operator] arising from, and in the course of, employment by [insert: name of the political subdivision owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: name of the political subdivision owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: name of the political subdivision owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Ohio State Fire Marshal, by any or all third parties, or by [insert: name of the political subdivision owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix L of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the effective date shown immediately below.

Effective Date: _____

[Insert: Name of the political subdivision acting as Guarantor].

[Authorized signature for Guarantor].

[Printed Name of Person Signing for the Guarantor].

[Official Title of Person Signing for the Guarantor].

Signature of witness or notary: _____

APPENDIX M

POLITICAL SUBDIVISION GUARANTEE WITHOUT STANDBY TRUST MADE BY THE STATE

Guarantee made this [insert: date] by the State of Ohio, herein referred to as Guarantor, to the Ohio State Fire Marshal and to pay any and all third parties, and obliges, on behalf of [insert: name of the political subdivision owner or operator].

Recitals

(1) Guarantor is the State of Ohio

(2) [Insert: Name of political subdivision owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number required in the annual registration application required by paragraphs (B) of rule 1301:7-9-04 of the Ohio Administrative Code, and the name and address of the facility.] This guarantee satisfies the requirements of rule 1301:7-9-05 of the Ohio Administrative Code for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraphs (H)(1) to (H)(1)(b) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating the above-identified underground storage tank(s).

(3) Guarantor guarantees to the Ohio State Fire Marshal and to any and all third parties that:

In the event that [insert: name of political subdivision owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the Ohio State Fire Marshal has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the Guarantor, upon instructions from the Ohio State Fire Marshal shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the Ohio State Fire Marshal determines that [insert: name of the political subdivision owner or operator] has failed to perform corrective action for releases arising out of the operation of the above - identified tank(s) in accordance with the requirements of rule 1301:7-9-13 of the Ohio Administrative Code, the Guarantor upon written instructions from the Ohio State Fire Marshal shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [insert: name of the political subdivision owner or operator] fails to satisfy a judgement or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [insert: name of the political subdivision owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming Guarantor as debtor, within ten days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [insert: name of the political subdivision owner or operator] pursuant to Chapter 1301:7-9 of the Ohio Administrative Code.

(6) Guarantor agrees to remain bound under this guarantee for so long as [insert: name of the political subdivision owner or operator] must comply with the applicable financial responsibility requirements of rule 1301:7-9-05 of the Ohio Administrative Code for the above-identified tank(s), except that Guarantor may cancel this guarantee by sending notice by certified mail to [insert: name of the political subdivision owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [insert: name of the political subdivision owner or operator], as evidenced by the return receipt. If notified of a probable release, the Guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(7) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert: name of the political subdivision owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: name of the political subdivision owner or operator] arising from, and in the course of, employment by [insert: name of the political subdivision owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: name of the political subdivision owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: name of the political subdivision owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Ohio State Fire Marshal, by any or all third parties, or by [insert: name of the political subdivision owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix M of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the effective date shown immediately below.

Effective Date: _____

State of Ohio.

[Authorized signature for Guarantor].

[Printed Name of Person Signing for the Guarantor].

[Official Title of Person Signing for the Guarantor].

Signature of witness or notary: _____

APPENDIX N

POLITICAL SUBDIVISION GUARANTEE WITHOUT STANDBY TRUST MADE BY A POLITICAL SUBDIVISION

Guarantee made this [insert: Date] by [insert: name of the political subdivision that is the guaranteeing entity], a political subdivision organized under the laws of the State of Ohio, herein referred to as Guarantor, to the Ohio State Fire Marshal and to any and all third parties, and obliges, on behalf of [insert: name of the political subdivision owner or operator].

Recitals

(1) Guarantor meets or exceeds [insert: "the state or political subdivision bond rating test requirements of paragraph (S) of rule 1301:7-9-05 of the Ohio Administrative Code." Or "the state or political subdivision financial test requirements of paragraphs (T) of rule 1301:7-9-05 of the Ohio Administrative Code." Or "the state or political subdivision fund requirements of paragraph (V) of rule 1301:7-9-05 of the Ohio Administrative Code."]

(2) [Insert: Name of the political subdivision owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number required in the annual registration application required by paragraphs (B) of rule 1301:7-9-04 of the Ohio Administrative Code, and the name and address of the facility.] This guarantee satisfies the requirements of rule 1301:7-9-05 of the Ohio Administrative Code for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars annual aggregate arising from operating the above-identified underground storage tank(s).

(3) Incidental to our substantial governmental relationship with [insert: name of the political subdivision owner or operator], Guarantor guarantees to the Ohio State Fire Marshal and to any and all third parties that:

In the event that [insert: name of political subdivision owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the Ohio State Fire Marshal has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the Guarantor, upon instructions from the Ohio State Fire Marshal shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the Ohio State Fire Marshal determines that [insert: name of the political subdivision owner or operator] has failed to perform corrective action for releases arising out of the operation of the above - identified tank(s) in accordance with the requirements of rule 1301:7-9-13 of the Ohio Administrative Code, the Guarantor upon written instructions from the Ohio State Fire Marshal shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [insert: name of the political subdivision owner or operator] fails to satisfy a judgement or award based on a determination of liability for bodily injury or property damage to third parties caused by accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the Guarantor, upon written instructions from the Ohio State Fire Marshal, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the Guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), Guarantor shall send within one hundred twenty days of such failure, by certified mail, notice to [insert: name of the political subdivision owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [insert: name of the political subdivision owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming Guarantor as debtor, within ten days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [insert: name of the political subdivision owner or operator] pursuant to Chapter 1301:7-9 of the Ohio Administrative Code.

(7) Guarantor agrees to remain bound under this guarantee for so long as [insert: name of the political subdivision owner or operator] must comply with the applicable financial responsibility requirements of rule 1301:7-9-05 of the Ohio Administrative Code for the above-identified tank(s), except that Guarantor may cancel this guarantee by sending notice by certified mail to [insert: name of the political subdivision owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [insert: name of the political subdivision owner or operator], as evidenced by the return receipt. If notified of a probable release, the Guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The Guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert: name of the political subdivision owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: name of the political subdivision owner or operator] arising from, and in the course of, employment by [insert: name of the political subdivision owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: name of the political subdivision owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: name of the political subdivision owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of paragraph (H) of rule 1301:7-9-05 of the Ohio Administrative Code.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Ohio State Fire Marshal, by any or all third parties, or by [insert: name of the political subdivision owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in Appendix N of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the effective date shown immediately below.

Effective Date: _____

[Insert: Name of the Political Subdivision acting as Guarantor].

[Authorized signature for Guarantor].

[Printed Name of Person Signing for the Guarantor].

[Official Title of Person Signing for the Guarantor].

Signature of witness or notary: _____

APPENDIX O

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the state or political subdivision owner or operator, or the state or political subdivision serving as a guarantor]. This letter is in support of the use of the state or political subdivision fund mechanism to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases in the amount of at least [insert: applicable dollar amount from paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code in words] dollars per occurrence and [insert: applicable dollar amount from paragraph (J)(1) of rule 1301:7-9-05 of Ohio Administrative Code in words] dollars annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this state or political subdivision fund mechanism: [List for each facility: the name and address of the facility where tanks are assured by this state or political subdivision fund].

[Insert: "The state or political subdivision fund is funded for the amount of coverage required by paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code." Or "The state or political subdivision fund is funded for five times the amount of coverage required by paragraph (H)(1) of rule 1301:7-9-05 of the Ohio Administrative Code." Or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name or state or political subdivision owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in a dedicated fund." Or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the Ohio Attorney General stating that (1) the use of the bonding authority will not increase the state's or political subdivision's debt beyond the legal debt ceilings established by the applicable state laws and (2) that prior voter approval is not necessary before use of the bonding authority."]

The details of the state or political subdivision fund are as follows: Amount in Fund (market value of fund at close of last fiscal year): _____

[If fund balance is incrementally funded as specified in paragraph (V)(3) of rule 1301:7-9-05 of the Ohio Administrative Code, insert: "Amount added to fund in the most recently completed fiscal year: _____

Number of years remaining in the pay-in-period: _____"]

A copy of the state constitutional provision, or state or political subdivision statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in Appendix O of rule 1301:7-9-05 of the Ohio Administrative Code as such regulations were constituted on the date shown immediately below.

[Date]

[Signature of Chief Financial Officer]

[Printed Name of Chief Financial Officer]

[Official Title of Chief Financial Officer]

APPENDIX P

CERTIFICATION OF FINANCIAL RESPONSIBILITY

[owner or operator] hereby certifies that it is in compliance with the requirements of rule 1301:7-9-05 of the Ohio Administrative Code.

The financial assurance mechanism(s) used to demonstrate financial responsibility under rule 1301:7-9-05 of the Ohio Administrative Code is (are) as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage, and the tanks covered by the mechanism.]

The financial assurance mechanism(s) listed above cover(s) taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases from underground storage tanks.

[Signature of owner or operator]

[Name of owner or operator]

[Title]

[Date]

[Signature of witness or notary]

[Name of witness or notary]

[Date]

The existing text of this rule is being rescinded and replaced with the following:

1301:7-9-07 Release detection methods and requirements for UST systems.

(A) Purpose and scope.

(1) For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish release detection requirements and methods for underground storage tanks containing petroleum or other regulated substances. This rule is adopted by the state fire marshal in compliance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(2) Where any provision in this rule creates a duty of compliance for an owner and operator, and the owner and operator are separate persons, compliance may be attained by either person. In the event of noncompliance, both are liable.

(B) Release detection requirements for new UST systems.

(1) New USTs shall be equipped and monitored for releases at least monthly using interstitial monitoring pursuant to paragraph (D)(1)(d) of this rule.

(2) Underground piping that routinely contains regulated substances that is part of a new UST system shall be equipped and monitored for releases pursuant to paragraph (D)(2)(b) and (D)(2)(c) of this rule except that:

(a) Underground piping that conveys petroleum under suction shall be equipped and monitored for releases pursuant to paragraph (D)(2)(d) of this rule; and

(b) A manifold that conveys petroleum under suction between tanks does not have to meet the interstitial monitoring requirements as described in paragraph (D)(2)(b) of this rule.

(3) Containments that are part of a new UST system shall be equipped and monitored for releases pursuant to paragraph (D)(3) of this rule.

(4) New UST systems containing motor or aviation petroleum fuels are not required to be monitored using product inventory control as described in paragraph (D)(1)(a) of this rule.

(5) New UST systems that store fuel for use by emergency power generators shall comply with release detection requirements pursuant to paragraphs (B)(1) to (B)(3) of this rule, except that owners and operators may request approval of an alternative method of release detection pursuant to paragraph (D)(4) of this rule in lieu of installing automatic line leak detectors on pressure lines.

(6) If a method of UST release detection authorized in paragraph (B)(1) of this rule is found to be defective, owners and operators shall immediately cause the method of release detection to undergo routine maintenance, modification or major repair.

(a) While the method of release detection undergoes routine maintenance, modification or major repair, owners and operators may use product inventory control or automatic tank gauging in accordance with paragraph (D)(1)(a) or (D)(1)(c) of this rule in order to meet the requirements of paragraph (B)(1) of this rule.

(b) Owners and operators may use product inventory control or automatic tank gauging in accordance with paragraph (D)(1)(a) or (D)(1)(c) of this rule for a period of up to sixty days after the last passing result obtained in accordance with paragraph (B)(1) of this rule. Afterwards, owners and operators shall take the UST system out of service in accordance with rule 1301:7-9-12 of the Administrative Code until such time as the routine maintenance, modification or major repair of the release detection method is complete.

(7) If an automatic tank gauge is found not to be defective, but cannot conduct a successful release detection test during a thirty day period due to low levels of regulated substance in the UST, owners and operators may use product inventory control in accordance with paragraph (D)(1)(a) of this rule as a method of UST release detection for a period of up to ninety days after the last passing result obtained in accordance with paragraph (C)(1)(a) of this rule.

(8) If an owner and operator elects to equip an UST system in a manner that exceeds the requirements of this rule, the owner and operator is only required to maintain the UST system to the extent required by this rule.

(9) Other methods of release detection may be used for tanks, piping and containments pursuant to paragraph (D)(4) of this rule.

(10) Release detection equipment located on new UST systems shall meet compatibility requirements described in paragraph (D)(9) of rule 1301:7-9-06 of the Administrative Code.

(C) Release detection requirements for existing UST systems.

(1) Existing UST systems shall be equipped and monitored for release in accordance with the following:

(a) Existing USTs shall be equipped and monitored for releases at least monthly using interstitial monitoring pursuant to paragraph (D)(1)(d) of this rule except that:

(i) Existing USTs installed prior to May 16, 2011, may use any of the release detection methods listed in paragraph (D)(1)(c) to (D)(1)(e) of this rule;

(ii) Existing USTs installed prior to May 16, 2011, with a capacity of five hundred fifty gallons or less and USTs with a capacity of five hundred fifty-one to one thousand gallons that meet the tank diameter criteria described in the table in paragraph (D)(1)(b)(iv) of this rule may use manual tank gauging in compliance with paragraphs (D)(1)(b) of this rule as the sole method of release detection; and

(iii) Existing USTs installed prior to May 16, 2011, with a capacity of five hundred fifty-one to two thousand gallons that do not meet the tank diameter criteria described in the table in paragraph (D)(1)(b)(iv) of this rule may still use manual

tank gauging in compliance with paragraph (D)(1)(b) of the rule as a method of release detection provided that a tank tightness test is performed in accordance with paragraph (F)(1)(a) of this rule once every five years;

(b) Existing underground piping that routinely contains regulated substances shall be equipped and monitored for releases pursuant to paragraph (D)(2)(a) to (D)(2)(d) of this rule except that:

(i) Existing piping associated with UST systems installed prior to March 1, 2005, does not have to meet the interstitial monitoring requirements as described in paragraph (D)(2)(b) of this rule;

(ii) Existing underground piping that conveys regulated substances under suction shall be equipped and monitored for releases pursuant to paragraph (D)(2)(d) of this rule;

(iii) An existing suction manifold between tanks does not have to meet the interstitial monitoring requirements as described in paragraph (D)(2)(b) of this rule; and

(c) Existing containments shall be equipped and monitored for releases pursuant to paragraph (D)(3) of this rule, except:

(i) Existing containments associated with UST systems installed prior to March 1, 2005, shall instead be equipped and monitored pursuant to paragraph (D)(6)(a) of rule 1301:7-9-06 of the Administrative Code, and

(ii) Containments associated with UST systems installed prior to March 1, 2005, that undergo work pursuant to paragraph (C)(7) of rule 1301:7-9-06 of the Administrative Code shall comply with the release detection requirements found in paragraph (C)(7) of this rule.

(2) Existing UST systems containing hazardous substances as defined in rule 1301:7-9-03 of the Administrative Code shall be equipped and monitored using interstitial monitoring as defined in paragraphs (B)(1) and (B)(2) of this rule except that:

(a) Existing containments originally configured with one release detection sensor located at the lowest point of the secondary containment system are not required to have sensors in every containment; and

(b) Existing underground piping and manifolds that convey hazardous substance under suction shall be equipped and monitored for releases pursuant to paragraph (B)(2) of this rule.

(3) Owners and operators using soil gas monitoring or ground water monitoring as the sole method of release detection for USTs and piping were required to comply with one of the release detection methods as provided in paragraphs (D)(1)(c) or (D)(1)(d) of this rule by December 31, 2005. Owners and operators may request to continue using said methods of release detection or request to use an alternative method provided that the owner and operator receives written approval from the state fire marshal pursuant to paragraph (D)(4) of this rule.

(4) Existing UST systems containing motor or aviation petroleum fuels are no longer required to be monitored daily using product inventory control as described in paragraph (D)(1)(a) of this rule.

(5) Existing UST systems, installed prior to May 16, 2011, that store fuel for use by emergency power generators are required to be equipped with a method of release detection pursuant to paragraph (C)(1) of this rule by October 13, 2018, except that owners and operators may request approval of an alternative method of release detection pursuant to paragraph (D)(4) of this rule in lieu of installing automatic line leak detectors on pressure lines.

(6) If a method of UST release detection authorized in paragraph (C)(1)(a) of this rule is found to be defective, owners and operators shall comply with paragraph (B)(6) of this rule and may use product inventory control as a method of UST release detection.

(7) If work is performed on an existing UST system in order to meet the requirements of paragraph (C)(7) of rule 1301:7-9-06 of the Administrative Code, then the UST, piping, or containments affected by the work shall meet the release detection requirements for new UST systems as described in paragraphs (B)(1) to (B)(3) of this rule, except that containments for existing UST systems installed prior to March 1, 2005, are not required to meet those requirements until fifty percent or more of the containments at the UST site undergo work pursuant to paragraph (C)(7) of rule 1301:7-9-06 of the Administrative Code.

(8) If an automatic tank gauge is found not to be defective, but cannot conduct a successful release detection test during a thirty day period due to low levels of regulated substance in the UST, owners and operators may use product inventory control in accordance with paragraph (D)(1)(a) of this rule as a method of UST release detection for a period of up to ninety days after the last passing result obtained in accordance with paragraph (C)(1)(a) of this rule.

(9) If an owner and operator elects to equip an UST system in a manner that exceeds the requirements of this rule, the owner and operator is only required to maintain the UST system to the extent required by this rule.

(10) Other methods of release detection may be used for tanks, piping and containments pursuant to paragraph (D)(4) of this rule.

(11) Release detection equipment located on existing UST systems shall meet compatibility requirements described in paragraph (D)(9) of rule 1301:7-9-06 of the Administrative Code.

(D) Methods, operation and maintenance of release detection systems on UST systems.

(1) UST release detection.

Owners and operators should carefully review the release detection requirements described in paragraphs (B) and (C) of this rule in order to determine which of the following methods apply to their UST system.

(a) Daily product inventory control shall be conducted as described in American Petroleum Institute 1621-12, “Bulk Liquid Stock Control at Retail Outlets".

(i) Inventory from UST systems shall be reconciled monthly. If the reconciliation for any month indicates an overage or shortage equal to or greater than one per cent of flow-through plus one hundred thirty gallons, owners and operators shall investigate the inventory discrepancy as described in American Petroleum Institute 1621-12, "Bulk Liquid Stock Control at Retail Outlets".

(ii) If inventory discrepancies occur for two consecutive months, owners and operators shall perform an investigation in accordance with all of the following:

(a) Conduct a tightness test of the UST system in accordance with paragraph (F) of this rule within seven days of discovery of the discrepancy; and

(b) Report any failure of a tightness test to BUSTR as a suspected release. A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if a tightness test leak rate exceeds the amount designated for the testing method. Passing tightness test results do not have to be reported to the state fire marshal.

(iii) Gauging sticks and charts used in the performance of daily product inventory control as described in paragraphs (D)(1)(a) of this rule shall be designed for the UST being measured and shall be maintained in working order.

(b) Manual tank gauging shall be conducted weekly and comply with the following requirements:

(i) Tank liquid level measurements shall be taken at the beginning and end of a time period using the appropriate minimum duration of test value in the table in paragraph (D)(1)(b)(iv) of this rule during which no liquid is added to or removed from the tank;

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

(iii) 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;

(iv) A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if the variation between the beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity	Minimum Duration of Test	Weekly Standard (One Test)	Monthly Standard (Four Test Average)
550 gallons or less	36 hours	10 gallons	5 gallons

551-1,000 gallons (when tank diameter is 64 inches)	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48 inches)	58 hours	12 gallons	6 gallons
551-1,000 gallons (requires tank tightness test every five years)	36 hours	13 gallons	7 gallons
1,001-2,000 gallons (requires tank tightness test every five years)	36 hours	26 gallons	13 gallons

(v) Gauging sticks and charts used in the performance of manual tank gauging as described in paragraphs (D)(1)(b) of this rule shall be designed for the UST being measured and shall be maintained in working order.

(c) Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

(i) 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;

(ii) The automatic tank gauging equipment must meet the inventory control (or other test of equivalent performance) requirements of paragraph (D)(1)(a) of this rule;

(iii) The test must be performed with the system operating in one of the following modes:

(*a*) In-tank static testing conducted at least monthly with no less than the minimum volume required by the manufacturer of the method during the test period; or

(*b*) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least monthly with no less than the minimum volume required by the manufacturer of the method during the test period;

(iv) A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if a 0.2 gallon per hour leak rate is detected from any portion of the tank;

(v) Equipment for automatic tank gauging shall be checked monthly to ensure that the equipment is operating with no alarms or other operating conditions present and to ensure records of release detection testing are reviewed and current; and

(vi) Equipment for automatic tank gauging, including probes, sensors and monitoring units, shall be evaluated annually to confirm proper calibration and operation in

accordance with the manufacturer's requirements. If the manufacturer is no longer in business, then the equipment shall be evaluated in accordance with paragraph (G) of this rule.

(d) Monitoring of the interstice of a secondarily contained UST shall comply with the following requirements:

(i) Monitoring of the interstitial space shall be performed at least monthly;

(ii) A secondarily contained UST shall have an interstitial monitoring method that can detect a release through the inner wall in any portion of the tank that routinely contains a regulated substance;

(iii) Any alarm from a sensor that is part of an interstitial monitoring method shall be evaluated within twenty-four hours to confirm proper operation or to confirm the presence of a release. A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if any regulated substance is detected between the inner and outer wall; and

(iv) Equipment for interstitial monitoring, including probes, sensors and monitoring units, shall be evaluated annually by a person recognized by the manufacturer as qualified to confirm proper calibration and operation in accordance with the manufacturer's requirements. If the manufacturer has no process to recognize qualified persons or if the manufacturer is no longer in business, then the equipment shall be evaluated in accordance with paragraph (G) of this rule.

(e) Statistical inventory reconciliation (SIR) shall comply with the following requirements:

(i) Report a quantitative result with a calculated leak rate at least monthly;

(ii) Be capable of detecting a leak rate of 0.2 gallon per hour or release of one hundred fifty gallons within thirty days;

(iii) Use a threshold that does not exceed one-half the minimum detectible leak rate. In order to have confidence in the ability of SIR to detect a leak rate of 0.2 gallon per hour, the threshold for declaring a leak shall be 0.1 gallon per hour;

(iv) A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if the SIR analysis indicates a threshold leak rate from the UST which is equal to or greater than 0.1 gallon per hour;

(v) Inconclusive SIR results or any analysis that is anything other than pass or fail shall be investigated as a suspected release pursuant to paragraph (C)(34)(a) of rule 1301:7-9-13 of the Administrative Code;

(vi) SIR may not be used to meet release detection requirements for piping described in paragraph (D)(2) of this rule;

(vii) SIR may not be used to meet tightness testing requirements described in paragraph (F) of this rule; and

(viii) Equipment for SIR, including gauging sticks and charts used in the performance of daily product inventory control as described in paragraph (D)(1)(a) of this rule, shall be designed for the UST being measured and shall be maintained in working order. Other probes, sensors, and monitoring units shall be evaluated annually to confirm proper calibration and operation in accordance with the manufacturer's requirements. If the manufacturer is no longer in business, then the equipment shall be evaluated in accordance with paragraph (G) of this rule.

(2) Piping release detection.

Owners and operators should carefully review the release detection requirements described in paragraphs (B) and (C) of this rule in order to determine which of the following methods apply to their UST system.

(a) Single wall piping that routinely contains regulated substances shall be monitored pursuant to paragraph (D)(2)(c) and (D)(2)(d) of this rule.

(b) Secondarily contained piping that routinely contains regulated substances shall be monitored pursuant to paragraphs (D)(2)(c) and (D)(2)(d) of this rule, and the interstice of the secondarily contained piping shall be continuously monitored for releases using one of the following methods:

(i) The sampling or testing method can detect a 0.2 gallon per hour leak rate from any portion of the inner wall of the piping that routinely contains a regulated substance. A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if a 0.2 gallon per hour leak rate is detected from any portion of the inner wall of the piping; or

(ii) The piping terminates or transitions in containments and the sampling or testing method can detect a release from any portion of the inner wall of the piping that routinely contains a regulated substance pursuant to paragraph (D)(3) of this rule.

(c) Requirements for pressure piping.

(i) Underground piping that conveys regulated substances under pressure shall be equipped with an automatic line leak detector attached to the piping that will alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through the piping or triggering an audible or visual alarm if the automatic line leak detector detects a leak of three gallons per hour at ten pounds per square inch line pressure within one hour. The owner and operator is permitted to restart the flow of regulated substances only once to verify the presence of a piping leak or an equipment malfunction. If the flow of regulated substance is restricted or shut off or in the event of an audible or visual alarm within two hours of a restart by an operator, a release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code.

(ii) Automatic line leak detectors shall be tested annually to confirm proper calibration and operation in accordance with the manufacturer's requirements. If the manufacturer is no longer in business, then the equipment shall be evaluated in accordance with paragraph (G) of this rule. Automatic line leak detectors shall be tested in accordance with the following:

(a) Automatic line leak detectors shall be tested in a manner that introduces a simulated leak into the product line between the tank and the dispenser. Automatic line leak detectors shall function within design specifications and the flow of product shall be restricted, stopped, or an alarm shall be activated; and

(b) Automatic line leak detectors that fail a test method shall undergo routine maintenance, modification or major repair, as appropriate, to restore the automatic line leak detectors to working order.

(iii) Underground piping that conveys regulated substances under pressure shall meet one of the following:

(a) Have an annual tightness test conducted in compliance with paragraph (F)(2)(a) of this rule;

(b) Have a monthly tightness test conducted by the on-site electronic line testing unit as described in paragraph (D)(2)(c) of this rule provided that the unit can detect a 0.2 gallon per hour leak rate at operating pressure; or

(c) Be a part of secondarily contained piping system whereby the interstice of the piping is continuously monitored pursuant to (D)(2)(b)(i) or (D)(2)(b)(ii) of this rule.

(d) Requirements for suction pumping.

(i) Underground piping that conveys regulated substances under suction shall be monitored for loss of vacuum indicated by an inability to dispense regulated substances or erratic operation of the pump. Within twenty-four hours of an UST owner and operator suspecting a loss of vacuum, the owner and operator shall initiate an investigation of the cause of the loss of vacuum. If an owner and operator is unable to make a determination of the loss of vacuum, then the loss of vacuum shall be considered a suspected release as defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code and the owner and operator shall comply with paragraph (F)(2) of rule 1301:7-9-13 of the Administrative Code. If the loss of vacuum is determined to be due to a leaking component, it shall constitute a release as defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code and the owner and operator shall comply with paragraph (F) of rule 1301:7-9-13 of the Administrative Code.

(ii) Underground piping that conveys regulated substances under suction shall meet one of the following:

(a) Have a tightness test conducted every thirty-six month period in compliance with paragraph (F)(2)(a) of this rule; or

(b) Demonstrate compliance with the following safe suction requirements:

(i) The underground piping operates at less than atmospheric pressure;

(ii) The underground piping is sloped so that the contents of the pipe will drain back into the 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 paragraphs (D)(2)(d)(ii)(b)(i) to (D)(2)(d)(ii)(b)(iv) of this paragraph to be readily determined.

(e) Above ground piping that routinely contains regulated substances that is fully visible to inspection is not required to be equipped with release detection. If a portion of the above ground piping is located below ground and the piping cannot be easily accessed for visual inspection, then the piping must be equipped and monitored for releases pursuant to paragraph (D)(2) of this rule.

(3) Release detection methods for containments.

Owners and operators should carefully review the release detection requirements described in paragraphs (B) and (C) of this rule in order to determine which of the following methods apply to their UST system.

(a) When required, containments shall be continuously monitored with sensors capable of detecting a release of a regulated substance before the release reaches the lowest penetration in the containment system. Sensors shall be located in every containment.

(b) Any alarm from a sensor in any containment system shall be evaluated within twenty-four hours to confirm proper operation or to confirm the presence of a release. A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if any regulated substance is detected in the containment sump.

(c) Release detection equipment for containments, including probes, sensors and monitoring units, shall be evaluated annually to confirm proper calibration and operation in accordance with the manufacturer's requirements. If the manufacturer is no longer in business, then the equipment shall be evaluated in accordance with paragraph (G) of this rule.

(4) Any other type of release detection method, or combination of methods, can be used if approved in writing by the state fire marshal pursuant to the following:

(a) The method can detect a 0.2 gallon per hour leak rate with a probability of detection of 0.95 and a probability of falsely indicating a release of 0.05; or the owner and operator can demonstrate the method can detect a release as effectively as any of the

corresponding methods allowed in paragraphs (D)(1)(c) to (D)(3) of this rule. In comparing methods, the state fire marshal shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. The state fire marshal may approve, deny or rescind the method at his discretion. If the method is approved, the owner and operator shall comply with any terms and conditions imposed by the state fire marshal on its use;

(b) A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if a release exceeds the leak rates established for the method approved by the state fire marshal; and

(c) Any method of release detection allowed by this paragraph shall be properly monitored, operated and maintained in accordance with any terms and conditions imposed by the state fire marshal on its use. At a minimum, the method shall produce a result at least every thirty days and the method shall be maintained and operated in accordance with the manufacturer's requirements unless the state fire marshal specifies otherwise.

(5) For all electronic and mechanical methods of release detection, a test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:

(a) Automatic tank gauge and other controllers: test alarm, verify system configuration, test battery backup;

(b) Probes and sensors: inspect for residual buildup, ensure floats move freely, ensure shaft is not damaged; ensure cables are free of kinks and breaks, test alarm operability and communication with controller; and

(c) Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller.

(E) Release detection recordkeeping.

UST system owners and operators shall maintain records demonstrating compliance with this chapter, and these records shall be maintained pursuant to the following:

(1) 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, and any schedules of required calibration and maintenance provided by the release detection equipment manufacturer shall be maintained for five years;

(2) The results of any sampling, testing, or monitoring, and the records of walkthrough inspections required by paragraph (E)(4) of rule 1301:7-9-06 of the Administrative Code shall be maintained for at least one year;

(3) The records demonstrating compatibility shall be maintained for as long as the UST system is used to store the regulated substance;

(4) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located at the facility shall be maintained for at least three years;

(5) Owners and operators shall provide the state fire marshal access to all records within one business day of a request; and

(6) Within thirty days of transfer of ownership of an UST system, the transferor shall provide the transferee with all records identified in this paragraph or with equivalent copies of said records.

(F) Testing methods for UST systems.

(1) Tightness testing for USTs.

(a) Tank tightness testing of the primary shell of both single wall and secondarily contained USTs shall be capable of detecting a one-tenth of a gallon per hour leak rate from any portion of the primary shell while accounting for the effects of thermal expansion or contraction of the regulated substance, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

(b) Tightness testing of the interstice of secondarily contained USTs shall be conducted in accordance with paragraphs (G)(1) to (G)(3) of this rule.

(2) Tightness testing for piping.

(a) Piping tightness testing of single wall pipe and the primary or inner pipe of secondarily contained pressure 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, or equivalent.

(b) Tightness testing of suction and other non-pressurized piping shall be conducted as follows:

(i) Piping that can be isolated from the UST shall be tested using a method capable of detecting a 0.1 gallon per hour leak rate at a minimum of fifteen pounds per square inch pressure, or equivalent; and

(ii) Piping that cannot be isolated from the UST shall be tested using a method capable of detecting a 0.1 gallon per hour leak rate.

(c) Tightness testing of the interstice of secondarily contained piping shall be conducted in accordance with paragraphs (G)(1) to (G)(3) of this rule.

(3) Testing of containments and spill prevention equipment shall be conducted in accordance with paragraphs (G)(1) to (G)(3) of this rule.

(4) All testing methods used to comply with paragraphs (F)(1)(a), (F)(2)(a), and (F)(2)(b) of this rule shall be third party approved to perform in a manner where the method can detect a release at the designated release rate with a probability of detection of 0.95 and a probability of falsely indicating a release of 0.05. Testing methods used to comply with paragraphs (F)(1)(b), (F)(2)(c), and (F)(3) of this rule are not required to be third party approved.

(5) The results from tightness testing methods performed in accordance with this chapter of the Administrative Code or the results from tightness testing methods for other activities such as but not limited to routine maintenance, UST system audits or property divestments shall be managed as follows:

(a) A release is suspected and subject to the reporting requirements of sections 3737.88 and 3737.882 of the Revised Code and this chapter of the Administrative Code if a leak rate exceeds the amount designated for the testing method except that:

(i) Non-passing results attributed to a failure of the outer wall of USTs described in paragraph (F)(1)(b) of this rule are not a suspected release, unless other release conditions pursuant to paragraph (C)(34) of rule 1301:7-9-13 of the Administrative Code are present; or

(ii) Non-passing results attributed to a failure of the outer wall of piping described in paragraph (F)(2)(c) of this rule are not a suspected release unless other release conditions pursuant to paragraph (C)(34) of rule 1301:7-9-13 of the Administrative Code are present; or

(iii) Non-passing results attributed to a failure of containment sumps or spill prevention equipment described in paragraph (F)(3) of this rule are not a suspected release unless other release conditions pursuant to paragraph (C)(34) of rule 1301:7-9-13 of the Administrative Code are present; or

(iv) Non-passing results that are part of preliminary tightness tests of components undergoing permit activities described in paragraph (C)(1) of rule 1301:7-9-10 of the Administrative Code are not a suspected release unless other release conditions pursuant to paragraph (C)(34) of rule 1301:7-9-13 of the Administrative Code are present.

(b) Any components required by this chapter that fail to achieve a passing result shall be immediately assessed and restored to working order in accordance with paragraph (G) of this rule or paragraph (E) of rule 1301:7-9-06 of the Administrative Code.

(6) No pressure testing with air shall be performed on a component of an UST system that has contained a flammable regulated substance or flammable vapors. The manufacturer's instructions for the testing method shall be followed when using gases for the test method.

(G) General performance standards, permits, certified UST installers and inspectors.

(1) All release detection systems and tightness testing methods shall be properly designed, constructed, installed, modified, repaired, operated and maintained in accordance with the requirements of this rule. Release detection components and tightness testing methods not specifically addressed in this rule shall comply with the manufacturer’s instructions or codes of practice developed by nationally recognized associations or independent testing laboratories or other industry best practices.

(2) All release detection systems and tightness testing methods shall be properly designed, constructed, installed, modified, repaired, operated and maintained by a qualified person in accordance with the requirements of this rule.

(a) Any person performing activities in accordance with this rule shall check paragraph (C) of rule 1301:7-9-10 of the Administrative Code prior to performing the activities to determine if a permit is required. Any activities requiring a permit shall be overseen by a certified UST installer and a certified UST inspector as required in paragraph (D) of rule 1301:7-9-10 of the Administrative Code.

(b) For activities that do not require a permit, or if the rule does not specifically identify a type of qualified person, then owners and operators may allow any person to perform such activities provided they follow manufacturer's instructions or codes of practice developed by nationally recognized associations or independent testing laboratories or other industry best practices.

(3) The following codes of practice may be used to comply with this rule:

(a) American Petroleum Institute Publication 1615-11, "Installation of Underground Petroleum Storage Systems";

(b) Petroleum Equipment Institute Publication RP100-11, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(c) Petroleum Equipment Institute RP1200-12, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

(4) Prior to going into operation, a functionality test shall be performed on any new or existing UST system component that undergoes work requiring a permit under paragraph (G)(1) of this rule. The UST system shall not be placed into operation until a passing functionality result is obtained for the UST system component undergoing work.

(5) Performing work pursuant to this rule does not relieve a person engaged in UST activity from the obligation to comply with any other applicable federal, state, or local laws and regulations, including but not limited to, the Ohio Fire Code and the Ohio Building Code.

(6) Other release detection requirements and methods may be used in place of any requirements or methods described in this rule if an owner and operator demonstrates that the alternative method is no less protective of human health and the environment than the method or requirement specified in this rule, and the state fire marshal approves the alternative method in writing prior to the use of the method. If the alternative method is approved, the owner and operator shall comply with any terms and conditions imposed on its use by the state fire marshal.

(H) Requirements for airport hydrant systems or field constructed tank systems.

(1) New and existing airport hydrant systems or new and existing field constructed tank systems shall comply with the release detection, operation, and maintenance requirements found in Subpart K of Part 280 of Title 40 Chapter I of the Code of Federal Regulations except that:

(a) Qualifying systems shall comply with the deadlines and conditions identified in rule 1301:7-9-01 of the Administrative Code;

(b) Vapor monitoring and groundwater monitoring shall not be used as methods of release detection unless approved pursuant to paragraph (G)(6) of this rule; and

(c) In addition to completing the walkthrough inspection requirements pursuant to paragraph (E)(4) of rule 1301:7-9-06 of the Administrative Code, owners and operators shall visually check hydrant pits and hydrant piping vaults for evidence of leaks or damage and remove any liquid or debris found. The check shall be performed monthly, unless confined spaced entry is required, in which case the check is required at least annually.

(2) New and existing airport hydrant systems or new and existing field constructed tank systems shall comply with the design, installation, construction, operation, maintenance and walkthrough inspection requirements found in paragraph (F) of Rule 1301:7-9-06 of the Administrative Code.

(3) Owners and operators of new and existing airport hydrant systems or new and existing field constructed tank systems may request to use alternative methods pursuant to paragraph (G)(6) of this rule.

1301:7-9-09 **Sensitive areas.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to division (A)(2) of section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to designate areas of this state as being sensitive for the protection of human health and the environment. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered part of the "Ohio Fire Code."

(B) An area is defined as a sensitive area if the area meets one or more of the following criteria:

(1) The following areas associated with an aquifer declared by the federal government under the Safe Drinking Water Act (42 U.S.C.A. 300f, et seq., as amended through January 7, 2011):

(a) Areas on Catawba Island in Ottawa county;

(b) Areas in Guernsey county located within the following described boundaries:

Township	Section(s)
T8N R9W	4, 5, 6, 7, 8, 9

"R" stands for Range. "T" stands for Township. "N" stands for North. "W" stands for West.

(c) Areas associated with the buried valley aquifer system of the Great Miami/Little Miami River Basins of Southwestern Ohio petitioned for by the Miami Valley Regional Planning Commission of Dayton, Ohio as determined by the U.S. environmental protection agency at 53 Fed. Reg. 15876 (1988), located within the following described boundaries:

(i) Areas in Champaign county located within the following described boundaries:

Township	Section(s)
R10T4	6, 12
R10T5	6, 12, 18, 30, 36
R10T6	24, 30, 36
R11T4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17, 18, 22, 23, 29, 30, 36
R11T5	1, 2, 3, 4, 5, 6, 7, 13, 18, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
R11T6	19, 31, 32, 33, 34, 35, 36
R12T4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 24, 25, 31
R12T5	1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 36
R13T4	1, 2, 3, 7, 8, 9, 13, 14, 15, 19, 20, 21, 25, 26, 27
R13T5	19, 20, 25, 26, 31, 32

"R" stands for Range. "T" stands for Township.

(ii) Areas in Clark county located within the following described boundaries:

Township	Section(s)
R8T3	6, 12, 17, 18, 23, 24, 29, 30, 36
R9T3	1, 2, 7, 8, 13, 14, 19, 20, 21, 25, 26, 27, 28, 29, 30,31, 32, 33, 34, 35, 36
R9T4	6, 10, 11, 12, 16, 17, 21, 22, 27, 31, 32, 33
R9T5	12, 18, 21, 22, 23, 24, 28, 29, 30
R10T4	1, 2, 3, 4, 5, 7, 8
R10T5	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 17, 29, 33, 34, 35
R10T6	23, 28, 29, 33, 34, 35

"R" stands for Range. "T" stands for Township.

(iii) Areas in Greene county located within the following described boundaries:

Township	Section(s)
R5T4	17, 18, 22, 23, 24, 30
R6T2	1, 2
R6T3	18, 24, 25, 26, 27, 28, 29, 30, 31, 32
R7T2	1, 2, 6, 8, 12
R7T3	2, 3, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 31, 32, 36
R7T4	18, 23, 24, 28, 29, 33, 34
R8T2	1, 2, 3, 7, 8
R8T3	10, 13, 14, 15, 16, 19, 20, 21, 22, 25, 26, 27, 28, 31, 32, 33, 34
R8T4	13

"R" stands for Range. "T" stands for Township.

Survey Tract(s)
386, 387, 389, 390, 417, 429, 432, 435, 438, 548, 571, 574, 576, 577, 598, 603, 616, 870, 904, 925, 929, 975, 1044, 1281, 1295, 1297, 1378, 1391, 1965, 2233, 2235, 2238, 2241, 2243, 2244, 2263, 2264, 2267, 2272, 2312, 2358, 2359, 2383, 2424, 2425, 2426, 2435, 2474, 2475, 2565, 2566, 3096, 3576, 3583, 3610, 3908, 3916, 4148, 4371, 4499, 4651, 4704, 4730, 4871, 9474, 10721, 12248

(iv) Areas in Logan county located within the following described boundaries:

Township	Section(s)
R13T4	4, 5, 10, 16
R13T5	17, 21, 22, 23, 27, 28, 29, 33, 34, 35, 36

"R" stands for Range. "T" stands for Township.

Survey Tract(s)
4493, 4525, 9878, 10109, 10718, 10719, 12099

(v) Areas in Miami county located within the following described boundaries:

Township	Section(s)
R9T1	6
R9T2	3, 4, 5, 6, 10, 11, 12, 17, 18, 23, 24, 30, 31, 32, 33, 34, 35, 36
R10T1	1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 17, 18, 23, 24
R10T2	19, 25, 26, 31, 32, 33
R11T1	13, 17, 18, 19, 20, 23, 24, 26, 27
R12T1	19, 20, 25, 26, 27, 31, 32, 33
T7N R4E	1, 2, 3, 10
T6N R5E	12, 13
T4N R6E	3, 4, 5, 6, 7, 10, 11, 14, 23, 24, 25, 26, 35, 36
T8N R4E	36
T7N R5E	17, 18, 19, 20, 28, 29, 30, 31, 32, 33
T5N R6E	5, 8, 9, 16, 17, 20, 21, 22, 27, 28, 29, 31, 32, 33, 34
T6N R6E	32
T7N R6E	31, 32

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East.

(vi) Areas in Montgomery county located within the following described boundaries:

Township	Section(s)
R5T2	28, 29, 34, 35, 36
R6T1	3, 4, 5, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 25, 26, 27, 28, 31, 32
R7T1	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
R7T2	13, 14, 17, 18, 20, 21, 22, 23, 24, 27, 28, 29, 30, 32, 33, 34, 35, 36
R8T1	2, 3, 4, 5
R8T2	13, 19, 25, 31, 32, 33, 34, 35, 36
T3N R4E	1, 3, 4, 5, 10, 11, 12, 13, 14, 23, 24
T4N R4E	1, 12, 17, 18, 19, 20, 21, 23, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T5N R4E	26, 35, 36
T2N R5E	2, 3, 7, 10, 15, 17, 18, 19, 20, 22, 23, 26, 27, 28, 29, 30
T3N R5E	6, 7, 16, 17, 21, 24, 25, 26, 27, 28, 32, 33, 34, 35, 36
T4N R5E	9, 10, 13, 14, 15, 16, 23, 24, 25
T5N R5E	2, 3, 10, 11, 14, 15, 22, 23, 24, 25, 26, 36
T1N R6E	3, 4, 5, 8, 17, 18, 19, 30
T2N R6E	1, 2, 4, 5, 6, 8, 9, 11, 12, 13, 14, 15, 16, 19, 21, 22, 27, 28, 29, 30, 31, 32, 33, 34
T3N R6E	1, 2, 11, 13, 14, 23, 24, 26, 30, 31, 32, 35

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for

East.

(vii) Areas in Preble county located within the following described boundaries:

Township	Section(s)
T6N R2E	3, 9, 10, 15, 16
T4N R3E	1, 2
T5N R3E	2, 3, 4, 5, 9, 10, 11, 15, 22, 25, 26, 27, 34, 35, 36
T6N R3E	3, 4, 32, 34
T7N R3E	21, 22, 27, 28, 33, 34

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East.

(viii) Areas in Shelby county located within the following described boundaries:

Township	Section(s)
T9N R5E	1, 2, 3, 9, 10, 11, 12, 13
T7N R6E	5, 6, 7, 8, 17, 18, 19, 20, 29, 30
T8N R6E	31, 32

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East.

(d) Areas associated with the southern portion of the buried valley aquifer system of the Great Miami/Little Miami River Basins of Southwestern Ohio petitioned for by the Ohio-Kentucky-Indiana Regional Council of Governments of Cincinnati, Ohio as determined by the U.S. environmental protection agency at 53 Fed. Reg. 25670 (1988), located within the following described boundaries:

(i) Areas in Butler county located within the following described boundaries:

Township	Section(s)
R2T1	3, 4, 5, 6, 8, 9, 10, 11, 14, 15, 20
R3T1	1, 2, 3
R2T2	3, 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 21, 22, 23, 24, 27, 28, 29, 30, 33, 34, 35, 36
R3T2	22, 26, 27, 28, 31, 32, 33, 34
R3T3	12
R4T1	1, 2, 3
R4T2	7, 8, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34
T3N R2E	13, 14, 15, 22, 23, 24, 25, 26, 27, 28, 32, 33, 34, 35, 36
T1N R3E	5, 6, 7, 8, 18
T5N R1E	2, 11, 14, 23, 24, 25, 36
T4N R2E	1, 12
T5N R2E	25, 30, 31

T2N R3E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 20, 21, 22, 23, 24, 28, 29, 32
T3N R3E	29, 30, 31, 32, 33, 34, 36
T1N R4E	4, 5, 6, 7, 8, 18
T2N R4E	1, 2, 10, 11, 12, 13, 14, 15, 21, 22, 27, 28, 29, 30, 31, 32, 33

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East.

(ii) Areas in Clermont county located within the following described boundaries:

Survey Tract(s)
430, 590, 631, 1017, 1545, 1748, 1767, 2195, 4848

(iii) Areas in Hamilton county located within the following described boundaries:

Township	Section(s)
R1T1	1, 2, 3, 4, 7, 8, 9
R1T2	28, 29, 30, 34
R1T3	1, 2, 3, 6, 7, 8, 9, 12
R1T4	24, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
R1T5	13, 14, 17, 18, 19, 23, 26, 27, 28
R2T1	19, 25
R2T2	1, 7
R2T3	19, 25, 31
R2T4	13
T1N R1E	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16, 17, 20, 21, 22, 27, 28, 29, 30, 31, 32
T1N R2E	6, 7
T2N R1E	1, 2, 3, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 28, 29, 30, 32, 33, 36
T2N R2E	3, 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 30, 31
FR1T1	5, 6
FR1T2	35, 36
FR1T4	12, 17, 18, 23, 24, 29, 30, 35
FR1T5	23, 24, 29, 30
FR2T1	5, 6, 11, 12, 17, 21, 22, 23, 24, 27, 31, 32, 33
FR2T3	1, 4, 5, 6, 10, 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28
FR2T4	3, 9, 13, 14, 15, 16, 19, 20, 21, 22, 23, 25, 28, 29, 31, 34, 35, 36
FR2T5	18, 22, 23, 24, 28, 33, 34

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East. "FR" stands for Fractional Range.

Survey Tract(s)

395, 410, 427, 535, 536, 552, 1575, 1723, 1769, 1775, 2204

(iv) Areas in Warren county located within the following described boundaries:

Township	Section(s)
R2T4	10, 11, 12, 16, 17
R3T3	4, 5, 6
R3T4	1, 2, 5, 6, 7, 8, 10, 11, 12, 16, 17, 21, 22, 27, 28, 33, 34, 35, 36
R3T5	7, 13, 19, 25, 31
R4T2	1, 2
R4T3	31
R4T4	4, 5, 6, 10, 11
R5T2	27, 31, 32, 33
R5T3	1
R5T4	20, 21, 25, 26, 31
T1N R5E	3, 4, 5, 6, 7, 8
T2N R5E	26, 27, 28, 29, 30, 31, 32, 33, 34

"R" stands for Range. "T" stands for Township. "N" stands for North. "E" stands for East.

Survey Tract(s)
399, 421, 520, 598, 631, 791, 1494, 1500, 1546, 1547, 1548, 2464, 2527

(c) Areas associated with the Allen county area combined aquifer system ("ACACAS") as petitioned for by Spencerville Dumpbusters, Inc. of Spencerville, OH as determined by the U.S. environmental protection agency at 57 Fed. Reg. 53111 (1992), located within the following described boundaries:

(i) Areas in Allen county located within the following described boundaries:

Township	Section(s)
T2S R5E	19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T2S R6E	31
T3S R4E	1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, 36
T3S R5E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T3S R6E	6, 7, 18, 19, 29, 30, 31, 32
T4S R4E	1, 2, 3, 10, 11, 12, 13, 14, 15
T4S R5E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
T4S R6E	4, 5, 6, 7, 8, 9, 17, 18, 19, 29, 30

"R" stands for range. "T" stands for township. "S" stands for south. "E" stands for east.

(ii) Areas in Auglaize county located within the following described boundaries:

Township	Section(s)
T4S R4E	19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T4S R5E	19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T4S R6E	31, 32
T5S R4E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 26
T5S R5E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27
T5S R6E	5, 6, 7, 8

"R" stands for range. "T" stands for township. "S" stands for south. "E" stands for east.

(iii) Areas in Mercer county located within the following described boundaries:

Township	Section(s)
T4S R2E	1, 12, 13
T4S R3E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T5S R3E	1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 23, 24, 26

"R" stands for range. "T" stands for township. "S" stands for south. "E" stands for east.

(iv) Areas in Putnam county located within the following described boundaries:

Township	Section(s)
T1S R4E	24, 25, 35, 36
T1S R5E	19, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T2S R5E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
T2S R6E	6

"R" stands for range. "T" stands for township. "S" stands for south. "E" stands for east.

(v) Areas in Van Wert county located within the following described boundaries:

Township	Section(s)
T2S R4E	1, 2, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T3S R3E	1, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36
T3S R4E	4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 33
T4S R4E	4, 5, 6, 7, 8, 9, 16, 17, 18

"R" stands for range. "T" stands for township. "S" stands for south. "E" stands for east.

(f) Areas associated with the buried valley aquifer system of the Great Miami/Little Miami river basins of southwestern Ohio petitioned for by the Miami Valley regional planning commission of Dayton, Ohio as determined by the U.S. Environmental Protection Agency at 53 Fed. Reg. 15876 (1988), and areas associated with the southern portion of the buried valley aquifer system of the Great Miami/Little Miami river basins of southwestern Ohio petitioned for by the Ohio Kentucky Indiana regional council of Governments of Cincinnati, Ohio as determined by the U.S. Environmental Protection Agency at 53 Fed. Reg. 25670 (1988), located within the following described boundaries:

(i) Areas in Butler County located within the following described boundaries:

Township	Section(s)
R2T3	27, 28, 32, 33, 34
R4T2	15
T2N R3E	30, 31
T2N R4E	23, 24

"R" stands for range. "T" stands for township. "N" stands for north. "E" stands for East.

(ii) Areas in Hamilton County located within the following described boundaries:

Township	Section(s)
R1T1	10
R1T5	20
R2T4	7
FR1T4	34
R3T4	7

"R" stands for range. "T" stands for township. "FR" stands for fractional range.

(iii) Areas in Montgomery County located within the following described boundaries:

Township	Section (s)
R8T2	4, 5, 6

"R" stands for range. "T" stands for township.

(iv) Areas in Warren County located within the following described boundaries:

Township	Section (s)
T1N R5E	1, 2

"R" stands for range. "T" stands for township. "N" stands for north. "E" stands for east.

(2) The area is located within fifty horizontal feet of a private water supply well or developed spring not located on the same site as the UST system;

(3) The area is located within one of the following and is not located on the same site as the UST system:

(a) One hundred horizontal feet of a water supply well designated by Ohio environmental protection agency to be a public water supply and which has a net production rate of less than or equal to ten thousand gallons per day; or

(b) Two hundred horizontal feet of a water supply designated by Ohio environmental protection agency to be a public water supply and which has a net production rate of greater than ten thousand gallons per day to less than or equal to fifty thousand gallons per day; or

(c) Three hundred horizontal feet of a water supply designated by Ohio environmental protection agency to be a public water supply and which has a net production rate of greater than fifty thousand gallons per day.

(4) The area is located within a half-circle shaped area one thousand feet upstream of a public water supply surface water intake where the base line of the half-circle is perpendicular to the stream at the intake and has a diameter of two thousand feet, and where the midpoint of the base line is the intake, and where the radius of the half-circle is one thousand feet, unless the owner or operator demonstrates to the state fire marshal that the UST system is located or will be located in a surface water drainage area that is actually downstream of the intake.

(5) The area is located within two hundred horizontal feet of a lake or reservoir. To be considered a lake or reservoir for purposes of this paragraph the average surface area of the body of water must be a minimum of five acres.

(6) The area is located within one hundred horizonal feet of a man-made underground structure, tunnel or cavity used primarily for pedestrian traffic or passenger-carrying vehicles;

(C) An area is defined as a sensitive area if the area meets any of the criteria listed in paragraphs (B)(1)(a) to (B)(1)(d) or paragraphs (B)(2) to (B)(6) of this rule on or after September 1, 1992.

(D) An area is defined as a sensitive area if the area meets any of the criteria listed in paragraph (B)(1)(e) of this rule on or after March 31, 1999.

(E) An area is defined as a sensitive area if the area meets any of the criteria listed in paragraph (B)(1)(f) of this rule on or after March 1, 2005.

1301:7-9-10 **Permits for UST systems.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish permit requirements for underground storage tanks containing petroleum or other regulated substances. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) **Storage tank systems that are partially exempt as described in paragraph (E) of rule 1301:7-9-01 of the Administrative Code are not required to obtain a permit for activities listed in paragraph (C)(1) of this rule or use certified UST installers and UST inspectors as described in paragraph (D) of this rule.**

(C) Permits.

(1) A permit is required to perform all of the following activities on an UST system:

(a) ~~**Install**~~ **Installation**;

(b) ~~**Remove**~~ **Removal**;

(c) ~~**Close**~~ **Closure**-in-place;

(d) ~~**Take out of**~~ **Removal from** service more than ninety days;

(e) ~~**Perform**~~ **Performance of** a change in service;

(f) Performance of a change of product;

(g)~~**(f)**~~ ~~**Perform**~~ **Performance of** a major repair of an UST system that has caused a release; or

(h)~~**(g)**~~ ~~**Perform**~~ **Performance of** a modification of an UST system or component.

(2) A permit is not required to operate an UST system or perform routine maintenance or normal operational upkeep of an UST system.

(3) A permit must be obtained prior to any permit related activity taking place~~. The~~ **unless the** state fire marshal or the local fire agency that has been given delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code having jurisdiction over the location where the activity is to take place ~~**may give**~~ **gives** verbal approval **or establishes an alternative notification process** to allow permit related activity to be performed prior to the issuance of a permit ~~**on a case by case basis**~~.

(4) Any person engaged in an activity requiring a permit shall submit a permit application form prescribed by the state fire marshal accompanied by any drawings or additional information required on the prescribed application form. A permit shall be obtained for any of the activities

described in paragraph (C)(1) of this rule from the local fire agency that has been given delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code having jurisdiction over the location where the activity is to take place. Otherwise, the permit shall be obtained from the **state** fire marshal.

(a) The authority issuing the permit shall review the permit application and, if the authority determines that the proposed activity is in compliance with this rule and that the appropriate fee has been paid, the authority shall issue the permit. The authority may place upon the permit such terms and conditions as the authority determines to be necessary to bring the proposed activity into compliance with this chapter.

(b) Any permit issued under this paragraph shall not be construed as authority to violate any provision of this chapter.

(c) The state fire marshal may revoke any permit pursuant to Chapter 119~~.~~ of the Revised Code if upon inspection any violation of this chapter exists, if conditions of a permit have been violated, or if there has been any false statement or misrepresentation as to a material fact on the permit application or supporting documentation.

(5) For permits obtained from the state fire marshal, the permit fee shall be thirty-five dollars for each location described in the permit application. Inspections conducted by a state fire marshal employee shall be billed at a rate of sixty dollars per hour for each hour or fraction thereof at the inspection location. The state fire marshal may bill the owner of the underground storage tank or the owner of the property where the underground storage tank is located. Permit and inspection fees for permits obtained from a local fire agency that has been delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code shall be established by the local fire agency.

(6) No person shall operate any UST system or portion thereof upon which there are past due permit fees or inspection fees owed to the state fire marshal. Inspection fees will be considered past due if they are not actually received by the state fire marshal within thirty days of the date of the invoice. Nothing in this paragraph shall be construed to establish inspection fees charged by an UST inspector certified pursuant to rule 1301:7-9-15 of the Administrative Code.

(7) Obtaining a permit pursuant to this rule does not relieve a person engaged in underground storage tank activity from**:**

(a) the obligation of obtaining any other applicable federal, state, or local permits~~.~~**, or**

(b) ~~**Nor does it relieve a person engaged in underground storage tank activity from**~~ the obligation of complying with any other applicable federal, state, or local laws and regulations.

(D) Certified UST installers and UST inspectors.

~~**(1)**~~ All activity requiring a permit shall be supervised by an installer certified pursuant to rule 1301:7-9-11 of the Administrative Code**, unless instructed otherwise by this chapter**. All activity requiring a permit shall be inspected by an employee of the state fire marshal or a certified UST inspector who has been certified by the state fire marshal to conduct such inspections pursuant to rule 1301:7-9-15 of the Administrative Code**, unless instructed otherwise by this chapter**. No

person shall operate any UST system or portion thereof until the activity requiring a permit has been inspected.

1301:7-9-11 **Underground storage tank installer certification and training.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to section 3737.881 of the Revised Code, the state fire marshal hereby adopts this rule to establish underground storage tank installer certification and training requirements. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered part of the "Ohio Fire Code".

(B) Supervising the following activities while being physically on site shall constitute supervision over the installation ~~**or replacement**~~ of UST systems:

(1) Preparation of the excavation immediately prior to receiving backfill and any component of the UST system;

(2) Setting of the UST system, including placement of any anchoring devices, backfilling to the level of the UST system, and strapping, if any;

(3) Any time during the installation in which components of the piping are connected, field coated, or cathodically protected;

(4) Any time during the installation of containment system components;

(5) All pressure testing of any component of the UST system;

(6) Completion of the backfilling and filling of the excavation; and

(7) The final precision test and the test of any release detection systems required by rule 1301:7-9-07 of the Administrative Code.

(C) Supervising the following activities while being physically on site shall constitute supervision over the performance of major repairs on site to UST systems where a release has occurred:

(1) The actual ~~**purging and**~~ excavation**, purging, and removal** of existing UST systems **or individual components, if applicable**;

(2) The actual performance of major repairs to the UST system;

(3) Any time during the major repair project in which components of the piping are connected;

(4) Any time during the major repair project in which the UST or its associated piping is pressure tested;

(5) The major repair of piping valves, fill pipes, vents, leak detection devices, containment systems, cathodic protection systems or spill and overfill protection devices; and

(6) The final precision test and the test of any release detection systems required by rule 1301:7-9-07 of the Administrative Code, if applicable.

(D) Supervising the following activities while being physically on site shall constitute supervision over the closure-in-place of UST systems:

(1) The ~~cleaning and~~ **excavation,** purging**, opening, and cleaning** of the UST system;

(2) ~~The filling with an inert solid material of the UST system;~~

~~(3)~~ All testing associated with the cleaning and purging processes; ~~and~~

(3) The filling with an inert solid material of the UST system; and

(4) Any time during the closure-in-place in which components of the UST system are disconnected or capped.

(E) Supervising the following activities while being physically on site shall constitute supervision over the removal of UST systems:

(1) ~~The cleaning and purging of the UST system;~~

~~(2)~~ The actual excavation**, purging,** ~~and~~ removal**, and cleaning** of the UST system or any of its components;

(2)~~(3)~~ All testing associated with the cleaning and purging processes;

(3)~~(4)~~ Any time during the removal in which components of the UST system are disconnected or capped; and

(4)~~(5)~~ The final disposition of the UST system before the UST system leaves the site.

(F) Supervising the following activities while being physically on site shall constitute supervision over the performance of modifications on site to UST system components:

(1) The actual ~~purging and~~ excavation**, purging, removal, and cleaning** of **the** ~~existing~~ UST ~~systems~~ **system or any of its components**, if applicable;

(2) The actual performance of modifications of any components;

(3) Any time during the modification project in which components of the piping are connected;

(4) Any time during the modification project in which the UST or its associated piping is pressure tested; and

(5) The final precision test and the test of any release detection systems required by rule 1301:7-9-07 of the Administrative Code, if applicable.

(G) Supervising the following activities while being physically on site shall constitute supervision over the placing of an UST system out of service for more than ninety days or the performance of a change in service of an UST system:

(1) The emptying, capping**,** and securing of an UST, piping**,** and ancillary equipment as part of placing

an UST system out of service for more than ninety days pursuant to paragraph (E)(3) of rule 1301:7-9-12 of the Administrative Code; or

(2) The purging and cleaning of an UST system and the removal or closure-in-place of piping and ancillary equipment, if applicable, as part of a change in service pursuant to paragraph (H) of rule 1301:7-9-12 of the Administrative Code.

(H) General installer requirements.

(1) Certified installers shall supervise work in a manner that minimizes the release of regulated substances from UST systems and minimizes the build-up hazardous vapors in association with work performed on UST systems. Certified installers shall not assign work activities to unqualified persons.

(2) Certified installers shall have a copy of their current certificate issued by the state fire marshal at the location where they are supervising work. Upon request of a fire official, certified installers shall make their current certificate available for inspection by the fire official.

(3) Any person performing work in accordance with this chapter shall obtain a permit as required in paragraph (C) of rule 1301:7-9-10 of the Administrative Code prior to performing the work. All work performed pursuant to this chapter shall be overseen by certified UST installer and a certified UST inspector as required in paragraph (D) of rule 1301:7-9-10 of the Administrative Code. No certified UST installer shall interfere with or obstruct an employee of the state fire marshal or a certified UST inspector performing an inspection required by rule 1301:7-9-15 of the Administrative Code.

(4) Regardless of the circumstances, certified installers shall immediately secure an UST system in a safe manner and cease all UST related work if directed to do so by an inspector certified pursuant to rule 1301:7-9-15 of the Administrative Code or an employee of the state fire marshal. UST related work shall not resume until approval is given by the state fire marshal.

(I) Application requirements.

Any person who wishes to apply for installer certification shall meet all of the following application requirements:

(1) The applicant shall submit an application to the state fire marshal, on a form furnished by the state fire marshal, accompanied by a non-refundable fee of one hundred fifty dollars;

(2) The applicant shall be an individual and shall be at least eighteen years of age;

(3) The applicant need not be a resident of Ohio. If the applicant is not a resident of Ohio, the applicant shall provide an irrevocable consent to legal service from Ohio on a form prescribed and furnished by the state fire marshal.

(4) The applicant shall demonstrate that he is in good standing with all licensing authorities by whom licensing is required, given the nature and scope of the applicant's work, and that he has not had a business or occupational license or certificate suspended or revoked in this or any other state. The state fire marshal may issue a certificate to an applicant who has had a business or occupational license or certificate suspended or revoked where the suspension or revocation, by reason of its

date or nature, is not directly related to the applicant's competence to install, perform major repairs on site to, close-in-place, or remove UST systems. The state fire marshal may check with other certification or licensing boards with which the applicant is registered to confirm the absence of violations of federal, state, or local laws and regulations relating to the applicant's ability to supervise the installation of, performance of major repairs on site to, closure-in-place of~~–~~, or removal of UST systems in a competent manner.

(5) The applicant shall supply the state fire marshal with three business references who can verify the applicant's experience in the installation of, performance of major repairs on site to, closure-in-place of, or removal of UST systems.

(6) The applicant shall demonstrate that he meets one of the following:

(a) Has obtained a certificate of completion from an installer training program pursuant to paragraph (M)(3) or (M)(9) of this rule and has, within two years immediately prior to making application, participated in the installation of, performance of major repairs on site to, closure-in-place of, or removal of three UST systems or, with approval of the state fire marshal, similar experience in closely related UST system work;

(b) Is a registered professional engineer and has, within two years immediately prior to making application, participated in the installation of, performance of major repairs on site to, closure-in-place of~~-~~, or removal of six UST systems or, with approval of the state fire marshal, similar experience in closely related UST system work; **or**

(c) Within two years immediately prior to making application, participated in the installation of, performance of major repairs on site to, closure-in-place of, or removal of twelve UST systems or, with approval of the state fire marshal, similar experience in closely related UST system work. Of the participation, six shall have involved the installation of UST systems.

(7) The applicant shall complete the examination requirements of paragraph (J) of this rule.

(J) Examination requirements.

(1) The applicant shall submit payment of a twenty-five dollar non-refundable fee at the time of application.

(2) The examination shall be a written multiple-choice examination covering all aspects of the installation, major repair, closure-in-place, removal, modification, placing out of service, performing a change in service, and performing evaluations of leak detection equipment of underground storage tank systems. The examination shall consist of two parts, the first testing the applicant's knowledge of provisions of the sections 3737.88 to 3737.882 of the Revised Code and this chapter of the Administrative Code, and the second testing the applicant's knowledge of current technological and industry recommended practices with respect to the proper installation, major repair, closure-in-place, removal, modification, placing out of service, performing a change in service, and performing evaluations of leak detection equipment of UST systems. An applicant may request permission to take the examination in oral form~~,~~ **for** good cause shown**, as determined by the state fire marshal**.

(3) To satisfactorily pass the examination, the applicant shall obtain a minimum score of seventy-five per cent on each of the two parts of the exam. Any applicant who fails the examination may request

re-examination upon payment of a non-refundable twenty-five dollar fee. An application will remain pending for that purpose for a period of one year after the date the application was submitted. If the applicant has not requested re-examination within the one year period, the applicant must file a new application for certification with the state fire marshal.

(4) The examination shall be offered by the state fire marshal at least six times a year at such places as the state fire marshal determines. The state fire marshal shall announce the time and location of an examination at least twenty days in advance of the exam and shall, at least seven days in advance of the exam, provide notice of the exam to all persons who have completed applications for certification since the date of the previous examination. Only persons who have filed applications in accordance with paragraph (I)(1) of this rule and submitted the fee pursuant to paragraph (J)(1) of this rule are eligible to take the examination.

(5) All examinations will be graded and the applicants notified of the results within twenty days of the date of the examination. Examination papers will not be returned to the applicant, but may be reviewed by the applicant at the office of the state fire marshal or alternate locations as approved by the state fire marshal.

(6) At the time the application is filed, the state fire marshal shall furnish the applicant with a set of instructions to assist the applicant in preparing for the examination. Instruction sheets will refer the applicant to appropriate laws and regulations and industry publications, including, but not limited to, the references listed in this chapter of the Administrative Code.

(K) New certification procedures.

(1) The state fire marshal shall issue an installer certificate to each applicant who meets the requirements of paragraphs (I) to (J)(3) of this rule. The certificate shall be valid from the time of issuance by the state fire marshal to the renewal date.

(2) The application for an installer certification shall be denied by the state fire marshal pursuant to Chapter 119 of the Revised Code when any of the following occur:

(a) The applicant failed to provide the information required by the application form prescribed by the state fire marshal;

(b) The applicant failed to provide the fee required for application and examination;

(c) The applicant failed to comply with paragraph (I)(6) of this rule;

(d) The applicant failed to obtain a minimum score of seventy-five per cent on each of the two parts of the exam administered pursuant to paragraph (J)(2) of this rule;

(e) The applicant is not in good standing with all licensing authorities as provided in paragraph (I)(4) of this rule; or

(f) The applicant made a misrepresentation or submitted false statements with the application.

(L) Renewal of certification.

(1) Certificates issued by the state fire marshal pursuant to paragraph (K)(1) of this rule shall be

renewed annually by the installer. **No less than ninety days prior to expiration of a certification, the state fire marshal shall send a renewal application to the certification holder at the latest address indicated on file.** Any installer who wishes to apply for installer certification renewal shall meet all of the following renewal requirements:

(a) Prior to the expiration date of their installer certification, submit an installer certification renewal application to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee of one hundred fifty dollars;

(b) Demonstrate in a manner prescribed by the state fire marshal attendance at a minimum of eight hours of state fire marshal-approved continuing installer education within the previous twelve months; and

(c) Demonstrate that he is in good standing with all licensing authorities by whom licensing is required, given the nature and scope of the installer's work, and that he has not had a business or occupational license or certificate suspended or revoked in this or any other state. The state fire marshal may renew a certificate for an installer who has had a business or occupational license or certificate suspended or revoked where the suspension or revocation, by reason of its date or nature, is not directly related to the installer's competence to install, perform major repairs on site to, close-in-place, remove, modify, place out of service, perform a change in service, or perform evaluations of leak detection equipment of UST systems. The state fire marshal may check with other certification or licensing boards with which the installer is registered to confirm the absence of violations of federal, state, or local laws and regulations relating to the installer's ability to supervise the installation of, performance of major repairs on site to, closure-in-place of, removal of, modification of, placing out of service of, performing a change in service of, or performing evaluations of leak detection equipment of UST systems in a competent manner.

(2) Upon a determination by the state fire marshal that during the calendar year substantial changes have been made to sections 3737.87 to 3737.882 of the Revised Code, this chapter of the Administrative Code, or UST technology, the state fire marshal may require applicants for installer certification renewal to satisfactorily pass a written multiple-choice examination in addition to meeting the requirements in paragraph (L)(1) of this rule prior to issuance of the certification renewal for the subsequent calendar year. Applicants for installer certification renewal may request permission to take the examination in oral form, good cause shown. To satisfactorily pass the examination, the applicant for installer certification renewal shall obtain a minimum score of seventy-five per cent on the examination. The state fire marshal shall announce the time and location of the examination at least forty-five days in advance of the exam and shall, at least thirty days in advance of the exam, provide notice of the exam to all certified installers. An applicant for certification renewal who fails the examination may request re-examination from the state fire marshal.

(3) The state fire marshal shall issue an installer certificate renewal to each applicant who meets the requirements of applicable paragraphs (L)(1) and (L)(2) of this rule. The renewal certificate shall be valid for one year following the date of issuance by the state fire marshal.

(4) The application for an installer certification renewal shall be denied by the state fire marshal pursuant to Chapter 119 of the Revised Code when any of the following occur:

(a) The applicant failed to provide all the information required by the application form prescribed

by the state fire marshal;

(b) The applicant failed to provide the fee required for application;

(c) The applicant failed to obtain a minimum score of seventy-five per cent on the exam administered pursuant to paragraph (L)(2) of this rule;

(d) The applicant is not in good standing with all licensing authorities as provided in paragraph (L)(1)(c) of this rule;

(e) The applicant failed to attend a minimum of eight hours of state fire marshal-approved continuing installer education;

(f) The applicant made a misrepresentation or submitted false statements with the application; or

(g) The applicant failed to submit his application on or before the expiration date of their certification.

(5) The state fire marshal may grant a variance from the timely submittal of renewal applications if the applicant provides good cause as determined by the state fire marshal.

(6) ~~Sixty days after~~ **After** expiration of a certification, any application for renewal will be considered as a new application and the applicant shall be required to pass an examination as defined in paragraph (J) of this rule prior to certification.

(M) Installer training programs.

(1) The state- fire marshal may conduct installer training programs. Any such program shall be at least thirty-six hours in length and shall include appropriate instructional methods, and written pre-test and post-test examinations. The following topics will be included in the program:

(a) Sections 3737.87 to 3737.882 of the Revised Code;

(b) This chapter of the Administrative Code;

(c) Occupational health and safety;

(d) Installation of USTs including tanks and piping, cathodic protection, ancillary equipment, backfilling, and UST system testing;

(e) Release detection systems;

(f) General operation and maintenance of ~~USTS~~ **USTs** and leak detection equipment;

(g) Majors repairs and modifications;

(h) Closure including removal, closure-in-place, and change in service;

(i) Recordkeeping;

(j) Supervisory techniques;

(k) Public health and safety; and

(l) Environmental considerations.

(2) Any person who wishes to attend a training program sponsored by the state fire marshal pursuant to paragraph (M)(1) of this rule shall submit an application to the state fire marshal prior to the first scheduled day of the training program, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee established by the state fire marshal.

(3) Upon conclusion of any installer training program, the state fire marshal shall issue a certificate of completion to all persons who meet all of the following requirements:

(a) Attended all of the program's sessions or has complied with paragraph (M)(4) of this rule;

(b) Submitted an application and fee to the state fire marshal pursuant to paragraph (M)(2) of this rule; and

(c) Completed the programs pre-test and post-test examinations.

(4) Attendance shall be required at all classroom sessions except for valid reasons. The faculty is authorized to determine the validity of absences. Any absentee from any scheduled classroom session shall make up such attendance as required by the faculty.

(5) Any person wishing to sponsor an installer training program shall submit an application to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee of two hundred dollars. All applications shall include, without limitation, all of the following:

(a) A program description and syllabus;

(b) Lesson plans for each classroom session;

(c) Study materials and hand-outs;

(d) Names, addresses, and qualifications of all faculty;

(e) Pre-test and post-test examinations; and

(f) The method of attendance verification;

(6) The state fire marshal may amend or require the applicant to modify any aspect of a program prior to certifying the program sponsor.

(7) The state fire marshal may certify a person to sponsor an installer training program if all of the following requirements are met:

(a) The person has complied with paragraph (M)(5) of this rule;

(b) The program, as amended by the state fire marshal or modified by the applicant pursuant to

paragraph (M)(6) of this rule, complies with the requirements of paragraph (M)(1) of this rule; and

(c) The instructor for the training program is a certified installer and possesses a valid installer certificate issued by the state- fire marshal pursuant to paragraph (K)(1) or (L)(3) of this rule.

(8) State fire marshal personnel shall be allowed access to all installer training program sessions certified under paragraph (M)(7) of this rule.

(9) Upon conclusion of any installer training program for which a person has been certified to sponsor, the sponsor shall issue a certificate of successful completion to all persons who meet the requirements of paragraphs (M)(3)(a) and (M)(3)(c) of this rule. The certified sponsor shall submit to the state fire marshal a list of all persons receiving a certificate of successful completion and the results of all examinations conducted during the program within seven days of completion of the course.

(10) Certifications issued by the state fire marshal pursuant to paragraph (M)(7) of this rule and renewals issued by the state fire marshal pursuant to paragraph (M)(11) of this rule shall be valid for one year, beginning on the first day of September of each year.

(11) Persons seeking to renew a certificate to sponsor an installer training program shall submit an application no later than the first day of July of each year to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee of one hundred fifty dollars. The application shall include, without limitation, a description of any changes in the certified program proposed by the sponsor. The state fire marshal may amend or require the sponsor to modify any aspect of a program prior to issuing an installer training program certificate renewal to the sponsor. All programs for which a sponsor obtains an installer training program certificate renewal shall comply with paragraph (M)(1) of this rule.

(12) An application to sponsor an installer training program or renewal thereof shall be denied by the state fire marshal pursuant to Chapter 119 of the Revised Code when any of the following occur:

(a) The applicant failed to provide all the information required by the application form prescribed by the state fire marshal;

(b) The applicant failed to provide the fee required for application;

(c) The applicant made a misrepresentation or submitted false statements with the application;

(d) The training program submitted by the sponsor is determined by the state fire marshal to not comply with a provision of paragraphs (M)(5) to (M)(11) of this rule; or

(e) The applicant failed to submit a renewal application on or before the expiration date of their certification.

(13) The state fire marshal may grant a variance from the timely submittal of a renewal application if the applicant provides good cause as determined by the state fire marshal.

(14) Sixty days after expiration of a certification, any application for renewal will be considered as a new application and the applicant shall be required submit all information required by **this**

paragraph ~~(M) of this rule~~.

(N) Continuing education programs.

(1) The state fire marshal may conduct continuing education training programs for installers. Such programs shall be closely related to those topics listed in paragraph (M)(1) of this rule or related technical information.

(2) Any person who wishes to attend a continuing education training program sponsored by the state fire marshal pursuant to paragraph (N)(1) of this rule shall submit an application to the state fire marshal prior to the first scheduled day of the training program, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee established by the state fire marshal.

(3) Upon conclusion of any continuing education training program, the state fire marshal shall issue a certificate of attendance to all persons attending the program who have complied with paragraph (N)(2) of this rule. The certificate shall indicate the number of hours of state fire marshal-approved continuing education credit earned by the person at the program.

(4) Any person wishing to sponsor a certified installer continuing education training program shall submit an application to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee of fifty dollars. All applications shall include, without limitation, all of the following:

(a) A program description and syllabus;

(b) Lesson plans for each classroom session;

(c) Study materials and hand-outs;

(d) Names, addresses, and qualifications of all faculty; and

(e) The method of attendance verification.

(5) The state fire marshal may amend or require the applicant to modify any aspect of a program prior to certifying the program sponsor.

(6) The state fire marshal may certify a person to sponsor an installer continuing education training program if all of the following requirements are met:

(a) The person has complied with paragraph (N)(4) of this rule;

(b) The program, as amended by the state fire marshal or modified by the applicant pursuant to paragraph (N)(5) of this rule, is closely related to those topics listed in paragraph (M)(1) of this rule; and

(c) The person is a certified installer and possesses a valid installer certificate issued by the state fire marshal pursuant to paragraph (K)(1) or (L)(3) of this rule.

(7) The state fire marshal shall determine the number of hours of continuing education credit for which the program qualifies. Certified UST installer and inspector continuing education training

programs shall not be offered together unless prior approval is given by the state fire marshal.

(8) Upon conclusion of any installer continuing education training program for which a person has been certified to sponsor, the sponsor shall issue a certificate of successful completion to all persons attending the program who meet the following requirements:

(a) Attended all of the program sessions or has complied with paragraph (M)(4) of this rule; and

(b) Successfully completed the program's pre-test and post-test examinations.

The certificate shall indicate the number of hours of state fire marshal-approved continuing education credit earned by the person attending the program. The certified person shall submit to the state fire marshal a list of all persons receiving a certificate of attendance which indicates the number of hours of state fire marshal-approved continuing education credit earned by each person who received a certificate.

(9) Certifications issued by the state fire marshal pursuant to paragraph (N)(6) of this rule and renewals issued by the state fire marshal pursuant to paragraph (N)(10) of this rule shall be valid for one year, beginning on the first day of September of each year.

(10) Persons seeking to renew a certificate to sponsor an installer continuing education training program shall submit an application no later than the first day of July of each year to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee of fifty dollars. The application shall include, without limitation, a description of any changes in the certified program proposed by the sponsor. The state fire marshal may amend or require the sponsor to modify any aspect of a program prior to issuing an installer continuing education training program certificate renewal to the sponsor. All programs for which a sponsor obtains an installer training program certificate renewal shall be closely related to those topics listed in paragraph (M)(1) of this rule.

(11) An application to sponsor an installer training program or renewal shall be denied by the state fire marshal pursuant to Chapter 119 of the Revised Code when any of the following occur:

(a) The applicant failed to provide all the information required by the application form prescribed by the state fire marshal;

(b) The applicant failed to provide the fee required for application;

(c) The applicant made a misrepresentation or submitted false statements with the application;

(d) The training program submitted by the sponsor is determined by the state fire marshal to not comply with a provision of paragraphs (N)(4) to (N)(10) of this rule; or

(e) The applicant failed to submit their application on or before the expiration date of their certification.

(12) The state fire marshal may grant a variance from the timely submittal of renewal applications if the applicant provides good cause as determined by the state fire marshal.

(13) Sixty days after expiration of a certification, any application for renewal will be considered as a

new application and the applicant shall be required to submit all information required by **this** paragraph ~~**(N) of this rule**~~.

(O) Revocation or suspension of certification.

A certificate or renewal issued pursuant to this rule may be suspended or revoked by the state fire marshal pursuant to Chapter 119 of the Revised Code. Such suspension or revocation may occur for any of the following reasons:

(1) The person obtained his certification through fraud or misrepresentation;

(2) The installer recklessly violated a provision of this chapter;

(3) The installer recklessly caused or permitted a person under his supervision to install, perform a major repair on site to, close-in-place, remove, modify, place out of service, perform a change in service, or perform evaluations of leak detection equipment of an UST system in violation of this chapter;

(4) The installer was not physically on site during the performance of any of the activities described in paragraphs (B) to (G) of this rule;

(5) The installer interfered with or obstructed a certified UST inspector or an employee of the state fire marshal from performing an inspection required by rule 1301:7-9-15 of the Administrative Code;

(6) The installer failed to secure an UST system and cease work when directed by a certified UST inspector or an employee of the state fire marshal pursuant to paragraph (H)(4) of this rule; or

(7) The training program offered by the sponsor is determined by the state fire marshal to not comply with a provision of paragraphs (M)(1) to (M)(11) or (N)(1) to (N)(10) of this rule.

1301:7-9-12 **Out-of-service, closure-in-place, permanent removal, change-in-service, and closure assessment of UST systems.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish requirements for underground storage tank ~~(UST)~~ systems containing regulated substances that are changed-in-service, out-of-service, closed-in-place, or permanently removed. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code." The **USTs listed in paragraph (E) of rule 1301:7-9-01 of the Administrative Code are exempt from this rule.** ~~following UST systems are exempt from this rule:~~

~~(1) Wastewater treatment tank systems;~~

~~(2) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C.A. 2014 and following);~~

~~(3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the United States nuclear regulatory commission;~~

~~(4) Airport hydrant fuel distribution systems; and~~

~~(5) UST systems with field-constructed tanks.~~

(B) Applicability.

(1) Any person who holds a legal, possessory, or equitable interest in a parcel of real property on which an underground storage tank system is located, regardless of that person's status as an "owner" or "operator" as those terms are defined in section 3737.87 of the Revised Code, shall comply with paragraphs (A) to (H) of this rule. The owner and operator shall comply with the entire rule.

(2) In carrying out any activity under this rule, owners and operators shall comply with the provisions of rules 1301:7-9-13**,** ~~and~~ 1301:7-9-16**, and 1301:7-9-17** of the Administrative Code.

(C) Handling of regulated materials associated with an UST site.

The handling, transportation, and disposal of any regulated substance removed from an UST system, regulated soil, backfill materials, ~~ground water~~ **groundwater**, wash water, or other similar materials removed from the system or facility shall be managed in accordance with all applicable federal, state, and local regulations in effect for the type, volume, constituent concentration, and classification of the material.

(D) General performance standards, permits, certified UST installers, and inspectors.

(1) Any person performing work pursuant to paragraphs (E)(3) to (H) of this rule shall obtain a permit

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pursuant to paragraph (C) of rule 1301:7-9-10 of the Administrative Code, prior to performing work, from the local fire agency that has been given delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code and has jurisdiction over the area where the UST system is located, or, if the local fire agency does not have such authority, the state fire marshal.

(2) Unless stated otherwise, all work performed pursuant to paragraphs (E)(3) to (H) of this rule shall be supervised by a certified UST installer and inspected by a certified UST inspector as required in paragraph (D) of rule 1301:7-9-10 of the Administrative Code.

(E) Out-of-service requirements of UST systems.

(1) Out-of-service UST systems shall comply with the applicable requirements of this chapter including, but not limited to, the following:

(a) The UST system shall comply with registration requirements pursuant to rule 1301:7-9-04 of the Administrative Code;

(b) The UST system shall comply with the financial responsibility requirements pursuant to rule 1301:7-9-05 of the Administrative Code; and

(c) The UST system shall comply with the construction and operational requirements for cathodic protection pursuant to paragraphs (D)(1) to (D)(4) of rule 1301:7-9-06 of the Administrative Code.

(2) UST systems that have been taken temporarily out-of-service for ninety days or less shall have the fill line, gauge opening, and dispensing unit secured against tampering. Vent lines shall remain open and functioning.

(a) Regulated substances may remain in the UST system provided that release detection is performed pursuant to rule 1301:7-9-07 of the Administrative Code. Release detection is not required if the UST system is empty.

(b) An UST system shall be considered empty when all regulated substances have been removed so that no more than one inch of residue, or 0.3 per cent by volume of the total capacity of the UST system, remains in the UST system.

(3) If an UST system is out-of-service for more than ninety days, the UST system shall be maintained in the following manner:

(a) The vent lines shall be left open and functioning;

(b) All other lines, pumps, manways, and ancillary equipment shall be capped and secured; and

(c) The UST system shall be emptied. The UST system shall be considered empty when all regulated substances have been removed so that no more than one inch of residue, or 0.3 per cent by volume of the total capacity of the UST system, remains in the UST system.

(4) An out-of-service permit shall be obtained for a UST system out-of-service for more than ninety

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days in accordance with paragraph (C)(1) of rule 1301:7-9-10 of the Administrative Code.

(a) As a condition of the out-of-service permit:

(i) an inspection of the out-of-service UST system shall be performed as required by paragraph (D) of rule 1301:7-9-10 of the Administrative Code; and

(ii) the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located may require the owner or operator to submit copies of release detection records pursuant to paragraph (E) of rule 1301:7-9-07 of the Administrative Code.

(b) Prior to the expiration date of an out-of-service permit, a renewal of the out-of-service permit may be requested by submitting a new permit application pursuant to rule 1301:7-9-10 of the Administrative Code to the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located ~~prior to the expiration of the out-of-service permit~~.

(i) Neither a certified UST installer nor a certified UST inspector are required for the renewal of an out-of-service permit.

(ii) Any previously approved out-of-service permit for which a renewal application is submitted shall be extended until the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located acts upon the renewal application.

(c) The out-of-service permit or renewal permit shall be effective until the expiration date listed on the permit as issued by the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located. If no expiration date is listed on the permit, the out-of-service permit shall extend for twelve months commencing from the issuance date of the permit.

(d) The out-of-service permit application or renewal application shall be approved at the discretion of the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located.

(e) A variance from the timely submittal of an out-of-service permit application or renewal application may be granted provided that the person making the request demonstrates good cause as determined by the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located.

(5) An UST system that is out-of-service more than ninety days as part of a scheduled seasonal discontinuation of use is not required to obtain the out-of-service permit required in paragraph (E)(4) of this rule if all of the following conditions are met:

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(a) Written approval is obtained from the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located;

(b) The UST system is located at a marina, golf course, amusement park, or other seasonal facility as approved by the state fire marshal or the certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located;

(c) The UST system is maintained in accordance with paragraph (E)(3) of this rule; and

(d) The UST system has not been out-of-service for a period exceeding twelve months.

(6) If an UST system or portions of an UST system are out-of-service for more than twelve months or more than the time period approved in the out-of-service permit or renewal permit granted pursuant to paragraph (E)(4) of this rule, owners and operators and any person who holds a legal, possessory, or equitable interest in a parcel of real property on which an UST system is located, regardless of that person's status as an "owner" or "operator" as those terms are defined in section 3737.87 of the Revised Code shall **manage the UST system as follows** ~~**conduct one of the following**~~**:**

(a) **For a UST system which meets the performance standards pursuant to paragraphs (D)(1) to (D)(4) of rule 1301:7-9-06 of the Administrative Code:**

(i) Within **ninety** ~~**thirty**~~ days, place the UST system back into service pursuant to paragraph (E)(7) of this rule;

(ii)~~**(b)**~~ Within **ninety** ~~**thirty**~~ days, permanently remove, close-in-place, or perform a change-in-service of the UST system in accordance with this rule; or

(iii)~~**(c)**~~ Obtain a variance from the timely submittal of an out-of-service permit application or renewal application in accordance with paragraph (E)(4)(e) of this rule and request an out-of-service permit or renewal permit by submitting a permit application form pursuant to paragraph (E)(4) of this rule.

(b) For a UST system which does not meet the performance standards pursuant to paragraphs (D)(1) to (D)(4) of rule 1301:7-9-06 of the Administrative Code:

(i) Within ninety days, permanently remove or close-in-place the UST system in accordance with this rule, unless an out-of-service permit or a renewal permit is granted; or

(ii) Obtain a variance from the timely submittal of an out-of-service permit application or renewal application in accordance with paragraph (E)(4)(e) of this rule. Prior to applying for the out-of-service or renewal permit, a closure assessment shall be performed in accordance with this rule and a closure assessment report shall be

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submitted to the state fire marshal pursuant to paragraph (J) of this rule.

(7) An UST system that has been out-of-service may be placed back into service at any time provided that the UST system meets the following requirements:

(a) The UST system is equipped to meet the performance standards for existing UST systems pursuant to rules 1301:7-9-06 of the Administrative Code and release detection requirements pursuant to rule 1301:7-9-07 of the Administrative Code;

(b) For an UST system out-of-service more than twelve months, the UST and primary pipe that routinely contains regulated substances passes a tightness test in accordance with paragraph (F) of rule 1301:7-9-07 of the Administrative Code within seven days of going back into service;

(c) Within thirty days of bringing the UST system back into service, the owner or operator submits a modified registration application to the state fire marshal pursuant to rule 1301:7-9-04 of the Administrative Code;

(d) The UST system is in compliance with financial responsibility requirements pursuant to rule 1301:7-9-05 of the Administrative Code; and

(e) The state fire marshal has not issued an order prohibiting the UST system from going back into service.

(F) Closure-in-place requirements for UST systems.

(1) An UST system shall not be closed-in-place unless approved in writing by the state fire marshal or a certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code for the jurisdiction where the UST system is located. An UST system may be closed-in-place for any of the following reasons:

(a) The UST system is located adjacent to or under equipment or structures that will likely be damaged or weakened if the UST system is removed;

(b) The UST system is situated in a location where the removal is physically impossible; or

(c) Removal of the UST system may expose people or the environment to unreasonable hazards.

(2) Cost shall not be used as the sole reason to justify closure-in-place of an UST system.

(3) An UST system shall be closed-in-place in accordance with "American Petroleum Institute Recommended Practice **RP** 1604~~-2001~~; "Closure of Underground Petroleum Storage Tanks". The solid inert material used to fill an UST shall have a density that is greater than the density of water.

(G) Permanent removal requirements for UST systems.

(1) Permanent removal of an UST system shall be conducted in accordance with the following:

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(a) All UST systems or any part of an UST system permanently closed shall be removed from the ground unless certified fire safety inspector with delegated authority pursuant to rule 1301:7-9-15 of the Administrative Code or the state fire marshal for jurisdictions where such authority has not been delegated authorizes the closure-in-place of the UST system or any part of the UST system pursuant to paragraph (F)(1) of this rule;

(b) All UST systems being permanently removed shall comply with the cleaning, removal, and safety requirements of "American Petroleum Institute Recommended Practice **RP** 1604~~-2001;~~ "Closure of Underground Petroleum Storage Tanks", ~~"American Petroleum Institute Publication 2015-2001; Safe Entry and Cleaning of Petroleum Storage Tanks~~ and "~~The~~ National Institute for Occupational Safety and Health **Publication 80-106**; "Criteria for a Recommended Standard: Working In Confined Space";

(c) The UST shall be maintained in a safe condition by regularly monitoring the UST to ensure that an accumulation of explosive vapors does not occur;

(d) All liquid and residue shall be removed from the UST before the UST leaves the site and handled in accordance with paragraph (C) of this rule;

(e) The UST shall be rendered unusable and free of explosive vapors before the UST leaves the site by cutting up or crushing the UST or by perforating the UST with numerous holes using explosion-proof non-sparking tools. No UST shall be reused for any purpose unless written approval is obtained from the state fire marshal prior to the removal activity;

(f) All backfill from the tank cavity excavation, piping trenches, dispensing unit areas, and remote fill pipe trenches shall be removed;

(g) No more than twelve inches of native soil shall be removed from the side walls and bottom of the tank cavity excavation, piping trenches, dispensing unit areas, and remote fill pipe trenches. Where bedrock is encountered within the first twelve inches, remove native soil to bedrock. Further removal of soil from the tank cavity, piping trenches, dispensing unit areas, and remote fill pipe trenches for purposes of corrective action shall not be conducted without prior approval of the state fire marshal; and

(h) Backfill and native soil removed from the tank cavity excavation, piping trenches, dispensing unit areas, and remote fill pipe trenches may be stored on site in a stockpile for a period not to exceed one hundred ~~and~~ twenty days, provided that it has been placed on a concrete pad, asphalt pad, or impermeable synthetic liner, covered to prevent infiltration of rain water, and has been surrounded with a berm to minimize the run off water. Storage on site beyond one hundred twenty days shall only occur if prior approval has been granted by the state fire marshal. Backfill and native soil shall be handled in accordance with paragraph (C) of this rule.

(i) If free product is discovered during removal of any portion of an UST system, owners and operators shall report a suspected release to the state fire marshal within twenty-four hours and proceed to conduct corrective action in accordance with paragraph (F) of rule 1301:7-9-13 of the Administrative Code.

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(H) Change-in-service requirements for UST systems.

~~(1)~~ Change-in-service of an UST system ~~as defined in rule 1301:7-9-02 of the Administrative Code~~ shall be conducted in accordance with the following:

~~(a)~~(1) The UST shall be completely emptied and cleaned; and

~~(b)~~(2) All piping and ancillary equipment that is not part of the change-in-service shall be closed-in-place or removed pursuant to paragraphs (F) and (G) of this rule.

(I) Closure assessment.

(1) Activities subject to closure assessment.

(a) Owners and operators of UST systems shall conduct a closure assessment in accordance with this rule when the UST system, or any portion of the UST system:

(i) Is permanently removed, including removals resulting from modifications of product piping and associated components that routinely contain a regulated substance;

(ii) Is closed-in-place;

(iii) Undergoes a change-in-service;

(iv) Is out-of-service for more than twelve months without an approved permit extending the out-of-service period in accordance with paragraph (E)(4) of this rule; or

(v) Is out-of-service for more than the approved out-of-service period pursuant to paragraph (E)(4) of this rule unless a variance has been requested and approved in accordance with paragraph (E)(4)(e) of this rule.

(b) For those portions of the UST systems being assessed in a corrective action program under rule 1301:7-9-13 of the Administrative Code, a closure assessment is required unless a demonstration is made to show that those portions of the UST system requiring a closure assessment have been adequately assessed in accordance with rule 1301:7-9-13 of the Administrative Code or an alternative sampling plan is approved by the state fire marshal.

(c) Closure assessment activities listed in paragraphs (I)(2)(b) to (I)(2)(h), (I)(3), (I)(4), (J)(1), and (J)(2) of this rule are not required for piping and piping components, such as flex connectors and other underground ancillary equipment, that meet the performance standards for corrosion protection pursuant to paragraphs (D)(3) ~~through~~ and (D)(4)~~(c)~~ of rule 1301:7-9-06 of the Administrative Code and are not located in a sole source aquifer ~~in a Designated Sensitive Area as defined in rule 1301:7-9-09 of the Administrative Code~~, or in a Drinking Water Source Protection Area as defined in rule 1301:7-9-13(C) of the Administrative Code, under the following conditions:

(i) Permanently out-of-service piping is located in a common trench with piping associated

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with an operating UST system and the owner or operator demonstrates that the piping that is permanently out-of-service has passed a tightness test conducted pursuant to **paragraphs (F)(2)(a) and (F)(2)(b) of** rule 1301:7-9-07 ~~**(F)(2)(a) and (F)(2)(b)**~~ of the Administrative Code within ~~**60**~~ **sixty** days prior to being closed-in-place until closure assessment activities are conducted on the remaining piping in the trench under paragraphs (I)(1)(a)(i) to (I)(1)(a)(iii) of this rule;

(ii) Modifications to piping and piping components located beneath dispensers or over USTs that are not contained in a ~~**secondary**~~ containment sump and the owner or operator demonstrates that the piping components have passed a tightness test conducted pursuant to rule 1301:7-9-07 of the Administrative Code within ~~**60**~~ **sixty** days prior to modification of the piping components; or

(iii) Piping and piping components that are modified in order to install under dispenser containment and the owner or operator demonstrates that the piping components have passed a tightness test conducted pursuant to rule 1301:7-9-07 of the Administrative Code within ~~**60**~~ **sixty** days prior to the installation.

(d) Closure assessment activities listed in paragraphs (I)(2)(b) ~~**through**~~ **to** (I)(2)(h), (I)(3), (I)(4), (J)(1), and (J)(2) of this rule are not required for modifications to piping and piping components, such as flex connectors and other underground ancillary equipment, contained in a ~~**secondary**~~ containment sump beneath dispensers or over USTs that meet the performance standards for corrosion protection for product piping pursuant to paragraphs (D)(3) ~~**through**~~ **and** (D)(4)~~**(c)**~~of rule 1301:7-9-06 of the Administrative Code and the owner or operator demonstrates the UST system has passed one of the following:

(i) a tightness test of the piping components conducted pursuant to rule 1301:7-9-07 of the Administrative Code within ~~**60**~~ **sixty** days prior to modification of the piping components, or

(ii) a tightness test of the containment sump conducted pursuant to rule 1301:7-9-07 of the Administrative Code within ~~**60**~~ **sixty** days prior to modification of the piping components.

(e) Notwithstanding the testing requirements of paragraphs (I)(1)(c) or (I)(1)(d) of this rule, if free product is present in soil or backfill, or if there is evidence that a component is leaking or has leaked **to the soil or backfill**, a Site Check must be performed pursuant to paragraph (F)(3) of rule 1301:7-9-13 of the Administrative Code. **If there is evidence that a component is leaking or has leaked and appears to be contained within the containment sump, then a tightness test of the containment sump may be performed in accordance with paragraph (F) of rule 1301:7-9-07 of the Administrative Code. If the tightness test of the containment sump passes, a Site Check is not required.**

(f) All activities conducted pursuant to paragraph (I)(1)(c) or (I)(1)(d) of this rule shall be documented on a form prescribed by the state fire marshal and submitted to the state fire marshal within ~~**90**~~ **ninety** days of the completion of the activities. The form shall include, but not be limited to, the following:

(i) A site map which accurately depicts property boundaries, street locations, above ground

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~~structure(s)~~ **structures**, and the UST ~~system(s)~~ **systems** including the number of USTs, adjacent properties and their use, and the portions of the UST system being modified;

(ii) Results from a tightness test of the piping components or of the containment sump;

(iii) A description of the visual site evaluation required by paragraph (I)(2)(a) of this rule including the UST components being modified and the area immediately adjacent to the components being modified;

(iv) Copy of any permit required to be obtained in accordance with paragraph (D)(1) of this rule; and

(v) Documentation demonstrating compliance with corrosion protection.

(2) The closure assessment shall consist of the following:

(a) Owners and operators shall perform a visual site evaluation of the UST site to identify all evidence of past or present operational problems, including but not limited to, surface soil staining, concrete staining, concrete patchwork, areas where piping and pump islands existed, and all potential sources of contamination.

(b) Soil samples for the UST system or portion of the UST system required to undergo a closure assessment pursuant to paragraph (I)(1) of this rule shall be biased towards the area of greatest suspected contamination and collected from all of the following locations:

(i) Under both ends of each UST. If an UST is longer than thirty-five feet an additional sample shall be collected from under the middle of the UST;

(ii) Each side wall of the UST cavity excavation on a ten foot by ten foot grid system;

(iii) Every ten feet along piping runs that routinely contain regulated substances and under joints unless the sample location is within two linear feet of another sample collected in accordance with this section. If the piping run is less than ten feet in length, no sample is required to be collected **for the piping, but soil samples are still required for joints, couplings and elbows. If the piping run is associated with an airport hydrant system, an alternate sampling plan shall be submitted for approval by the state fire marshal prior to conducting the closure assessment**;

(iv) Underneath each dispensing unit where joints, elbows, and flex connectors are located. If the dispensing unit is located directly above the UST, no sample is required to be collected, provided the UST is being removed; and

(v) From below any remote fill pipe area located more than ten feet from the UST cavity excavation.

(c) Water samples for permanent removal shall be collected in the following manner:

(i) Water in the UST system excavation shall be completely evacuated and disposed of in

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accordance with all federal, state, and local laws and regulations. If water cannot be completely evacuated from the UST system excavation or if upon recharge of water from surrounding soil into the UST system excavation to a level sufficient for sample collection, a water sample shall be collected within a period not to exceed twenty-four hours following the evacuation.

(ii) Soil samples required ~~under~~ **pursuant to** paragraph (I)(2)(b)(i) of this rule need not be collected if a water sample is obtained in accordance with paragraph (I)(2)(c)(i) of this rule.

(d) When the UST system or portion of the UST system is required to undergo a closure assessment pursuant to paragraph (I)(1)(a)(i) of this rule, the following samples shall be collected and sent to an accredited laboratory for analysis:

(i) The two soil samples with the highest field screening readings from each UST cavity excavation including side wall samples. If the UST cavity excavation contained more than three USTs, an additional soil sample for each multiple or fraction of three USTs. If no field screening readings are exhibited, the samples submitted shall be biased toward the area(s) of greatest suspected contamination;

(ii) **For product piping:**

(a) ~~The~~ **One** soil sample ~~with the highest field screening reading from each piping run excavation~~ **for every five soil samples collected, or fraction thereof, from underneath all product piping, and**

(b) Notwithstanding the one-to-five ratio, at least one sample from each distinct piping run that leads to a separate dispensing area or remote fill shall be submitted.

The samples submitted for analysis shall be those with the highest field screening readings from each distinct piping run. The remaining samples shall be those with the highest field screening readings, regardless of location. If no field screening readings are exhibited, the sample submitted shall be biased toward the area(s) of greatest suspected contamination;

(iii) The soil sample with the highest field screening reading from each remote fill pipe area. If no field screening readings are exhibited, the sample submitted shall be biased toward the area(s) of greatest suspected contamination;

(iv) The soil sample with the highest field screening reading from each dispenser island. If more than three dispensing units are present at the island, an additional sample shall be submitted for each multiple or fraction of three dispensing units. If no field screening readings are exhibited, the sample submitted shall be biased toward the area(s) of greatest suspected contamination; and

(v) Any water samples that were collected.

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(e) When the UST system or portion of the UST system is required to undergo a closure assessment pursuant to paragraphs (I)(1)(a)(ii) ~~through~~ to (I)(1)(a)(v) of this rule, soil and water samples shall be collected by installing a minimum of three soil boring and monitoring wells in the area most likely to contain chemical(s) of concern above action levels. The soil borings and monitoring wells shall be installed, sampled, and analyzed in accordance with paragraphs (H)(1)(d)(ii) of rule 1301:7-9-13 of the Administrative Code. Soil boring and monitoring well locations shall be selected to ensure the evaluation of soil and ~~ground water~~ groundwater surrounding the UST system and be biased towards areas most likely to contain chemical(s) of concern. Soil borings and monitoring wells shall be installed and sampled within ninety days of the following:

(i) When an UST system is closed-in-place as described by paragraph (F) of this rule;

(ii) When an UST system is undergoing a change-in-service as described by paragraph (H) of this rule; or

(iii) When an UST system is out-of-service as described by paragraph (E)(6) of this rule for greater than twelve months without a permit or upon the expiration of an out-of-service permit.

(f) All soil samples collected shall be split into two components. One shall be packaged for field screening, and the other packaged for potential laboratory analysis. The sampling and packaging shall be in accordance with procedures established by the state fire marshal.

(i) Soil samples collected for field screening shall be screened on the UST site using equipment calibrated in accordance with manufacturer's instructions and procedures approved by the state fire marshal.

(ii) All samples shall be collected within twenty-four hours of completing the excavation.

(g) With prior approval from the state fire marshal, owners and operators may use the sampling procedures described in paragraph (I)(2)(e) of this rule in place of the sampling procedures described in paragraphs (I)(2)(b) to (I)(2)(d) of this rule to meet the sampling requirements for the removal of an UST system.

(h) If site conditions interfere with the collection of any samples required by paragraphs (I)(2)(b) to (I)(2)(e) of this rule, owners and operators shall obtain approval in writing from the state fire marshal for an alternative sampling protocol.

(i) If an UST system or portion of the UST system was permanently removed, closed-in-place, or underwent a change-in-service on or after September 1, 1992 and a closure assessment was not conducted in accordance with the closure assessment rules in effect at the time or a closure assessment report was not submitted, the state fire marshal may direct the owner or operator to collect soil and ~~ground water~~ groundwater samples by ~~installing~~ advancing a minimum of three soil borings ~~and monitoring wells~~ in the area most likely to contain chemical(s) of concern above action levels. If groundwater is encountered, monitoring wells shall be installed in the soil borings. The soil borings and monitoring wells shall be installed and

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sampled in accordance with paragraphs (H)(1)(d)(ii) of rule 1301:7-9-13 of the Administrative Code. Soil boring and monitoring well locations shall be selected to ensure the evaluation of soil and ~~ground water~~ groundwater surrounding the UST system and be biased towards areas most likely to contain chemical(s) of concern.

(3) Samples sent to the laboratory for analysis pursuant to paragraph (I)(2)(d) or (I)(2)(e) of this rule shall be analyzed for the appropriate chemical(s) of concern. The chemical(s) of concern shall be identified as follows:

(a) For UST systems that contained petroleum products classified as analytical group 1, 2, 3, or 4 as defined in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, the appropriate chemical(s) of concern and analytical methods shall be identified using Table 1 of paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code.

(b) For UST systems that contained petroleum products classified as analytical group 5 in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, chemical(s) of concern and analytical methods must be identified, as appropriate, based on reasonably available information related to typical additives, impurities and/or degradation products of the petroleum product stored or handled at the UST site. Chemical(s) of concern shall also be identified based on their toxicity, mobility, and persistence in the environment. The owner and operator shall consult with and obtain written approval from the state fire marshal for all chemical(s) of concern identified for analysis, the analytical methods to be used to measure the presence of those chemical(s) of concern, and the action levels established for all chemical(s) of concern.

(c) For UST systems that contained a hazardous substance(s) as described in paragraph ~~(D)~~(E) of rule 1301:7-9-03 of the Administrative Code, additional chemical(s) of concern and analytical methods must be identified, as appropriate, based on substance(s) stored in the UST system and reasonably available information related to typical additives, impurities, and/or degradation products. In addition, chemical(s) of concern shall be identified based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with and obtain written approval from the state fire marshal for all appropriate chemical(s) of concern identified for analysis, the analytical methods to be used to measure the presence of those chemical(s) of concern, and the action levels established for all chemicals of concern.

(4) Action level development and comparison shall be conducted as follows:

(a) Action level assumptions.

(i) Assume the soil to be soil class 1 as defined in paragraph (H)(2) of rule 1301:7-9-13 of the Administrative Code or submit laboratory analysis of the soil class that best represents the soil under the UST site in accordance with ASTM D2488-09a "Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)" or the Unified Soil Classification System. Bedrock shall be assumed to be soil class 1 for the purposes of this rule.

(ii) Assume ~~ground water~~ groundwater exists, and that ~~ground water~~ groundwater is drinking water.

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(iii) Assume residential land use.

(b) Action level determination.

(i) For UST systems that contained petroleum products classified as analytical group 1, 2, or 3 as defined in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, action levels must be obtained from Table 1 of this rule.

(ii) For UST systems that contained petroleum products classified as analytical group 4 as defined in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, action levels must be obtained from Table 1 of this rule. For chemicals of concern not listed in Table 1 of this rule, action levels shall be developed by the owner and operator using the same methodologies and assumptions used to determine the action levels set forth in the tables found in paragraph (J)(3) of rule 1301:7-9-13 of the Administrative Code.

(iii) For UST systems that contained petroleum products classified as analytical group 5 as defined in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, action levels shall be developed by the owner and operator using the same methodologies and assumptions used to determine the action levels set forth in the tables found in paragraph (J)(3) of rule 1301:7-9-13 of the Administrative Code.

(c) Action level comparison.

(i) For UST systems that contained petroleum products classified as analytical group 1, 2, 3, 4, or 5 as defined in paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code, soil and groundwater laboratory analytical results shall be compared to the action levels determined in paragraph (I)(4)(b) of this rule as follows:

(a) If laboratory analytical results exceed the action levels established for the petroleum UST site, owners and operators shall report a confirmed release to the state fire marshal within twenty-four hours of receiving the results and proceed to conduct corrective action in accordance with paragraph (H) of rule 1301:7-9-13 of the Administrative Code.

(b) If laboratory analytical results are **at or** below all applicable action levels, then no further action is required.

(ii) For UST systems that contained hazardous substances, if soil or groundwater analytical results indicate the presence of chemical(s) of concern identified in paragraph (I)(3)(c) of this rule, owners and operators shall proceed to conduct corrective action in accordance with requirements of sections 9003 and 9005 of the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. 6991b and 6991e, as amended. If laboratory analytical results indicate no chemical(s) of concern are detected in subsurface soil or ~~ground water~~ **groundwater**, then no further action is required.

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Table 1 Closure Action Levels

Drinking Water Action Levels*	Chemical of Concern	Soil Action Levels*		
		Class 1	Class 2**	Class 3**
0.005	Benzene	0.246	0.437	1.63
1	Toluene	70.7	168	850
0.7	Ethylbenzene	84.5	130	130
10	Total xylenes	42.7	51.8	63.5
0.0014	Naphthalene	0.511	1.12	4.99
0.015	1,2,4 Trimethyl benzene	2.37	5.89	7.99
0.12	Methyl Tertiary Butyl Ether (MTBE)	1.58	2.67	11.5
0.00005	1,2 - Dibromoethane (EDB)	0.000982	0.00177	0.00734
0.005	1,2 - Dichloroethane (EDC)	0.101	0.177	0.714
0.00092	Benzo (a) anthracene	12	12	12
0.0002	Benzo (a) pyrene	1.2	1.2	1.2
0.00092	Benzo (b) fluoranthene	12	12	12
0.0092	Benzo (k) fluoranthene	120	120	120
0.092	Chrysene	1,200	1,200	1,200
0.000092	Dibenz (a,h) anthracene	1.2	1.2	1.2
0.00092	Indeno (1,2,3 -cd) pyrene	12	12	12
N/A	TPH C_6-C_{12}	1,000	5,000	8,000
N/A	TPH C_{10}-C_{20}	2,000	10,000	20,000
N/A	TPH C_{20}-C_{34}	5,000	20,000	40,000

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Drinking Water Action Levels*	Chemical of Concern Class 1Class 1	Soil Action Levels*		
		Class 1	Class 2**	Class 3**
0.005	Benzene	0.149	0.252	0.937
1.0	Toluene	49.1	70.8	86.0
0.7	Ethylbenzene	45.5	83.0	282.0
10.0	Total Xylenes	15.7	18.0	21.7
0.04	Methyl tertiary butyl ether (MTBE)	0.47	0.788	3.44
0.00026	Benzo(a)anthracene	11.0	11.0	11.0
0.0002	Benzo(a)pyrene	1.1	1.1	1.1
0.00017	Benzo(b)fluoranthene	11.0	11.0	11.0
0.0017	Benzo(k)fluoranthene	110.0	110.0	110.0
0.047	Chrysene	1,100.0	1,100.0	1,100.0
0.0002	Dibenz(a,h)anthracene	1.1	1.1	1.1
0.00022	Indeno(1,2,3-cd)pyrene	11.0	11.0	11.0
0.14	Naphthalene	39.8	54.0	54.0
N/A.	TPH C_6-C_{12}	1,000.0	5,000.0	8,000.0
N/A	TPH C_{10}-C_{20}	2,000.0	10,000.0	20,000.0
N/A	TPH C_{20}-C_{34}	5,000.0	20,000.0	40,000.0

* COC concentrations are expressed in milligrams per liter (mg/l) or milligrams per kilogram (mg/kg).

** The use of soil class 2 or 3 during the closure assessment requires geotechnical analysis to confirm the classification in accordance with paragraph (I)(4)(a)(i) of this rule.

(J) Closure assessment report.

(1) Owners and operators shall submit one copy of the written closure report to the state fire marshal, which shall be received by the state fire marshal within ninety days from the date ~~of collecting~~ the samples **are** required **to be collected** by this rule.

(2) Owners and operators shall prepare the information collected in accordance with paragraph (I) of this rule on a form prescribed by the state fire marshal. The closure report shall include the following information:

(a) UST system owner, operator, and facility data.

(i) The facility name, address, zip code, telephone number, and county.

(ii) The facility owners' name, address, zip code, telephone number, and county.

(iii) The UST system owners' name, address, zip code, telephone number, and county.

(iv) The UST system operators' name, address, zip code, telephone number, and county.

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(b) UST system data.

(i) The age, capacity, use, and construction material of the UST system that has been closed-in-place, permanently removed, was out-of-service for more than twelve months, or has undergone a change-in-service.

(ii) The substance stored in the UST system.

(iii) Substances, other than petroleum, known to have been formerly stored in the UST system.

(iv) The status of any UST system that is currently-in-use, permanently removed, closed-in-place, undergoes a change-in-service, or has been taken out-of-service.

(v) ~~**Unknown; BUSTR;**~~ The disposition of the UST system.

(vi) Date of last use, if known.

(c) Waste disposal data.

(i) A description of the amount in cubic yards, the date generated, and the final disposition of any excavated soil or backfill materials. This information shall be included on a form prescribed by the state fire marshal.

(ii) A written description of the amount and disposition of any liquids generated from activities conducted in accordance with paragraph (I) of this rule.

(iii) Laboratory data sheets, including the chain-of-custody form(s), for any analysis performed on any liquids and excavated soil or backfill materials generated in accordance with paragraph (I) of this rule.

(d) Sampling data.

(i) Description of the sample collection procedures, sample preservation techniques, sample containers, and decontamination procedures associated with the closure assessment conducted in accordance with paragraph (I) of this rule.

(ii) Details of any field screening conducted, including the instrument readings, location and depth of sampling points, sampling methodology, instrument used, and instrument calibration associated with the closure assessment conducted in accordance with paragraph (I) of this rule.

(iii) A copy of the chain-of-custody form(s) documentation.

(iv) Date of sample collection.

(v) Name and affiliation of the person(s) collecting the samples.

(vi) Identify all **sample** locations and depths submitted for laboratory analysis.

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(e) Laboratory data.

(i) Laboratory analytical sample analysis results required as part of the closure assessment conducted in accordance with paragraph (I) of this rule, presented in tabular form, with laboratory data sheets attached.

(ii) Name, address, and telephone number of the laboratory.

(iii) Name(s) of the sample analyst(s).

(iv) Instrument calibration information.

(v) Sample analysis method used.

(vi) Laboratory detection and quantitation limits used.

(vii) Description of whether the sample analyzed is soil or water.

(viii) Date the samples were received by the laboratory.

(ix) Date the samples were analyzed by the laboratory.

(x) Laboratory analysis summary form as prescribed by the state fire marshal.

(f) Miscellaneous data.

(i) A site map which accurately depicts the sample locations, property boundaries, street locations, above ground structure(s), the UST system(s) including the number of UST~~'~~s, adjacent properties and their use, any known water wells located on the site, any known monitoring wells located on the site, any utilities uncovered as part of the excavation process, and the location(s) of any other known UST system(s) or portions thereof known to have been closed-in-place or permanently removed.

(ii) A description of the native soil encountered.

(iii) A description of the visual site evaluation required by paragraph (I)(2)(a) of this rule.

(iv) Name, address, telephone number of the UST inspector certified pursuant to rule 1301:7-9-15 of the Administrative Code who was present during the closure-in-place, permanent removal, or change-in-service.

(v) Name of the local fire department with jurisdiction over the UST site.

(vi) Date that the UST system(s) was closed-in-place, permanently removed, underwent a change-in-service, or was out-of-service for more than twelve months.

(vii) Copy of any permit required to be obtained in accordance with paragraph (D)(1) of this

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rule.

(viii) A completed copy of the closure form as provided by the state fire marshal.

(ix) A copy of the inspection field report signed by the certified installer and inspector.

(K) Previously closed UST systems.

When directed by the state fire marshal, the owner and operator of an UST system that was permanently removed, closed-in-place, or underwent a change-in-service before December 22, 1988, shall assess the excavation zone and close the UST system in accordance with this rule if releases from the UST system, in the judgement of the **state** fire marshal, pose a current or potential threat to human health and the environment.

(L) Requests for extensions.

If owners and operators desire an extension of time because they are unable to comply with paragraphs (I) ~~through~~ **to** (K) of this rule, the owner and operator shall:

(1) Prepare a written request on a form prescribed by the state fire marshal, signed by the owners and operators, setting forth the following:

(a) The date the information was to be submitted;

(b) The reasons for requesting the extension;

(c) The length of time for which the extension is requested;

(d) The name and complete address of the UST site that is the subject of the extension request; **and**

(e) ~~The name of the state fire marshal employee that is assigned to monitor the corrective actions activities at the UST site; and~~

~~(f)~~ The release number, assigned by the state fire marshal, for the UST site that is the subject of the extension request.

(2) Submit a written request in accordance with paragraph (L)(1) of this rule to the state fire marshal prior to the expiration of the time period that is the subject of the extension request. Submission of the written request required by paragraph (L)(1) of this rule is accomplished only upon the actual receipt of the request by the state fire marshal. The state fire marshal may grant, modify, or deny any extension request at his sole discretion.

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1301:7-9-13 Petroleum UST Corrective Action

(A) Purpose and scope.

For the purpose of prescribing rules in accordance with division (A) of section 3737.88 and division (B) of section 3737.882 of the Revised Code, the state fire marshal hereby adopts this rule to establish release reporting and corrective action requirements for underground storage tanks containing petroleum products. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the Ohio State Fire Code.

(B) Applicability.

(1) For releases reported on or after the effective date of this rule, owners and operators shall conduct corrective action in accordance with this rule.

(2) For releases reported prior to the effective date of this rule, owners and operators ~~may elect to conduct corrective action in accordance with this rule by submitting a letter to the state fire marshal stating their election to conduct corrective actions in accordance with this rule~~ may either:

(a) Elect to conduct corrective action in accordance with this rule by submitting a letter to the state fire marshal stating their election to conduct corrective actions in accordance with this rule, or

(b) Continue to conduct corrective action in accordance with the previous version of OAC 1301:7-9-13 under which corrective actions are currently being conducted. If an owner or operator fails to meet a compliance deadline while conducting corrective action under a previous version of this rule, the state fire marshal may, in his sole discretion, transfer the release to the current version of this rule.

(3) An owner or operator may make the election described in paragraph (B)(2)(b) of this rule at any time. Once made, the election is permanent. ~~Owners and operators conducting corrective actions in accordance with a previous version of OAC 1301:7-9-13, may continue to conduct corrective actions in accordance with that version until October 1, 2012. Thereafter, owners and operators shall conduct corrective actions in accordance with this rule.~~

~~(4) Owners and operators may request an extension of time pursuant to paragraph (Q) of this rule to continue corrective actions under a previous version of this rule where good cause exists as determined by the state fire marshal. The state fire marshal may grant, modify or deny any extension request at his sole discretion.~~

(C) Definitions.

(1) “Action levels” means non-site-specific concentrations for chemical(s) of concern that are protective of human health utilized during the tier 1 source investigation and delineation process specified in paragraphs (J)(2) and (J)(3) of this rule.

(2) “Adjacent property” means a property or properties whose borders are contiguous or partially contiguous with that of an UST site, or would be contiguous or partially contiguous with that of

an UST site but are separated by a street, road or other public thoroughfare.

(3) "Chemical(s) of concern" means the chemical or specific constituents of the petroleum released that are identified for evaluation during the corrective action process.

(4) "Confirmed Release" means chemical(s) of concern in subsurface soil or groundwater on an UST site found in concentrations above the action levels specified in paragraph (J) of this rule and confirmed through laboratory analysis of samples during:

(a) A closure assessment conducted pursuant to rule 1301:7-9-12 of the Administrative Code; or

(b) A Site Check conducted pursuant to paragraph (F)(3) of this rule.

~~(4)~~(5) "Delineation levels" means non-site specific concentrations of chemical(s) of concern that are designed to determine the most likely distribution of chemical(s) of concern in soil and ~~ground water~~ groundwater.

~~(5)~~(6) "Drinking ~~Water Source Protection Area~~ water source protection area" means the surface and subsurface area surrounding a public water supply well(s) supplying a community public water system, a non-community non-transient public water system, or a non-community transient public water system which will provide water from an aquifer to the well(s) within five years as delineated or endorsed by the Ohio ~~Environmental Protection Agency~~ environmental protection agency under Ohio's Wellhead Protection and Source Water Assessment and Protection Programs.

~~(6)~~(7) "Engineering controls" means physical modifications, (e.g., slurry walls, capping, vapor controls, point of use water treatment) that are recorded in an environmental covenant, for the purposes of reducing or eliminating the potential for exposure to a chemical(s) of concern.

~~(7)~~(8) "Environmental media" includes, but is not limited to air, soil, ~~ground water~~ groundwater and surface water.

~~(8)~~(9) "Exposure assessment" means the qualitative or quantitative determination or estimation of the magnitude, frequency, duration and route of exposure between a source area and a receptor.

~~(9)~~(10) "Exposure pathway" means a mechanism by which an individual or population may be exposed to a chemical(s) of concern originating from an UST site. Each exposure pathway includes a source or release from a source, a point of exposure, and an exposure route. If the point of exposure is not at the source, a transport medium (e.g., air or water) also is included.

~~(10)~~(11) "Exposure route" means the manner in which a chemical(s) of concern may come into contact with a receptor (e.g., ingestion, inhalation, dermal contact).

~~(11)~~(12) "Free product" means a separate liquid hydrocarbon phase that has a measured thickness of greater than one one-hundredth of a foot.

~~(12)~~(13) "~~Ground water~~ Groundwater" means water underlying an UST site in a saturated zone that:

(a) ~~Is~~ is capable of yielding a minimum of one and one-half gallons of water within eight hours of

purging; and

(b) ~~Has~~ **has** an in situ hydraulic conductivity greater than 5.0 x 10^{-6} centimeters per second.

~~(13)~~**(14)** "Institutional controls" means the restriction on use or access (e.g., engineering controls or environmental covenants) to an UST site to eliminate or minimize potential exposure to a chemical(s) of concern.

~~(14)~~**(15)** "Immediate Corrective Action" means the course of action to mitigate fire, explosion, vapor and safety hazards, including immediate or short-term abatement or containment measures to prevent the spread of a release.

~~(15)~~**(16)** "Interim Response Action" means the course of action taken prior to implementation of a remedial action to reduce further migration of chemicals of concern in their vapor, dissolved, or liquid phase, to reduce or eliminate the concentration of chemical(s) of concern at a source area(s) and/or in soil requiring treatment, or to otherwise eliminate exposure pathways. Interim response actions are not immediate corrective actions or remedial actions. Examples of interim response actions include, but are not limited to, over-excavation of a former UST area, and short-term dual-phase extraction in a source area.

~~(16)~~**(17)** "Natural attenuation" means the reduction in the concentration(s) of chemicals of concern in environmental media due to a combination of one or more naturally occurring physical, chemical or biological processes (e.g., diffusion, dispersion, absorption, chemical degradation and biodegradation).

~~(17)~~**(18)** "Non-residential land use" means land use that does not meet the criteria for residential land use. Non-residential land use includes, but is not limited to, commercial and industrial land use.

~~(18)~~**(19)** "Overfill" is a release that occurs when an UST is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

~~(19)~~**(20)** "Petroleum contaminated soil" means soil that contains chemical(s) of concern that exceed one or more of the re-use levels set forth in paragraph (D) of rule 1301:7-9-16 of the Administrative Code.

~~(20)~~**(21)** "Physical discovery" means:

(a) The presence of free product discovered during removal of any portion of an UST system, in an excavation on an UST site or on a property nearby an UST site;

(b) The discovery of petroleum product or petroleum product vapors in any of the following locations on an UST site or on a property nearby an UST site:

(i) in a building;

(ii) within or along building foundations or other subsurface manmade structures such as basements, pedestrian tunnels, and utility vaults;

(iii) within or along sewer **and utility** lines; or

(iv) in a drinking water well.

(c) The presence of free product in a monitoring or observation well located on an UST site or on property nearby an UST site;

(d) The presence of petroleum products observed on a surface water body located on an UST site or on property nearby an UST site suspected to have arisen from a release from that UST system;

(e) Laboratory analytical results which are above action levels set forth in paragraph (J) from a study or survey of an UST site or on property nearby other than from a site check conducted in accordance with paragraph (F)(3) of this rule or a Tier 1 Source Investigation conducted in accordance with paragraph (H)(1) of this rule;

(f) Evidence of petroleum product in soil or fill material or evidence of a component that has leaked or is leaking, observed during activities conducted pursuant to paragraph (I)(1)(c) of rule 1301:7-9-12 of the Administrative Code including, but is not limited to, observing petroleum liquid in or on the soil or fill material in the excavation/modification areas; or

(g) Evidence of petroleum product in soil or fill material or evidence of a component that has leaked or is leaking, observed during activities pursuant to paragraph (I)(1)(c) of rule 1301:7-9-12 of the Administrative Code, including, but is not limited to, observing petroleum liquid leaking, emitting, discharging, or escaping from the UST system, or observing petroleum product residue on components of the UST system or below the UST system components.

~~(21)~~(22) "Point(s) of demonstration" means a location(s) selected between the source area(s) and the potential point(s) of exposure where concentrations of chemical(s) of concern must be at or below a determined target level in environmental media that is protective of human health and the environment at the point of exposure.

~~(22)~~(23) "Point(s) of exposure" means the point(s) at which a receptor may come in contact with a chemical(s) of concern originating from an UST site.

~~(23)~~(24) "Reasonably anticipated future use" means future use of a UST site that can be predicted with a reasonably high degree of certainty given historical use, current use, and local government planning and zoning.

~~(24)~~(25) "Receptors" means aquatic life populations in a surface water body or person(s) that are or may be exposed to chemical(s) of concern from the release.

~~(25)~~(26) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing of a petroleum product from an UST system into the ~~ground water~~ groundwater, a surface water body, subsurface soil or otherwise into the environment.

~~(26)~~(27) "Residential land use" means land use where the current or intended use includes, but is not limited to, housing (single and multiple dwellings), educational facilities, day care, agricultural land, correctional facilities, custodial care or long term health care.

~~(27)~~(28) "Saturated zone" means a part or layer of the earth's crust, excluding the capillary zone, in which all voids are filled with water.

~~(28)~~(29) "Site conceptual exposure model" means the integrated representation of the complete and

potentially complete exposure pathways at a UST site.

~~(29)~~(30) "Site-specific target levels (SSTL)" means risk-based concentrations for chemical(s) of concern that are protective of human health and the environment developed for a particular UST site under the Tier 2 or Tier 3 evaluations.

~~(30)~~(31) "Source area(s)" means the location of free product, the location of the highest measured soil and/or ~~ground water~~ groundwater concentrations of the chemical(s) of concern or the location where the petroleum product was released.

~~(31)~~(32) "Spill" means the following:

(a) a release resulting from improper transfer practices to an UST system including, without limitation, the disconnecting of a delivery hose from a tank's fill pipe before the hose has drained completely, or

(b) any spilling, leaking, emitting, discharging, escaping, or disposal of a petroleum product into ~~ground water~~ groundwater, a surface water body, subsurface soil or otherwise into the environment while transferring or attempting to transfer petroleum products into an UST system.

~~(32)~~(33) "Surrounding area" means an area within one thousand five hundred feet of an existing or previously removed UST system.

~~(33)~~(34) "Surface water body" means a body of water greater than one acre in size or a river, creek or stream.

~~(34)~~(35) "Suspected release" means evidence ~~of~~ that a release ~~obtained~~ may have occurred through one or more of the following events:

(a) Monitoring results, including investigation of an alarm, from a release detection method required by rule 1301:7-9-07 of the Administrative Code that indicate a release may have occurred unless:

(i) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; ~~or~~

(ii) The leak is contained in the secondary containment and:

(*a*) Except as provided for in rule 1301:7-9-07 of the Administrative Code, any liquid in the interstitial space not used as part of the interstitial monitoring method is immediately removed, and

(*b*) Any defective system equipment or component is immediately repaired or replaced;

(iii) In the case of an inventory control discrepancy or inconclusive statistical inventory reconciliation (SIR) results, described in rule 1301:7-9-07 of the Administrative Code, a second month of data does not confirm the initial result or the evaluation of the discrepancy determines that no release has occurred; or

(iv) The alarm was investigated and determined to be a non-release event (for example, from a power surge or caused by filling the tank during release detection testing);

(b) **Reportable failed tightness test pursuant to paragraph (F)(5) of rule 1301:7-9-07 of the Administrative Code;**

(c) Unusual operating conditions ~~are~~ observed by the owners and operators **such as erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless all of the following apply:** ~~unless the system equipment is found to be defective but not leaking and is immediately repaired or replaced. Such unusual operating conditions shall include, without limitation, the erratic behavior of petroleum dispensing equipment, the sudden loss of petroleum from an UST system or an unexplained presence of water in the tank;~~

(i) The system equipment or component is found not to be releasing substances to the environment;

(ii) Any defective system equipment or component is immediately repaired or replaced; and

(iii) For secondarily contained systems, any liquid in the interstitial space not used as part of the interstitial monitoring method is immediately removed;

~~(c)~~**(d)** The presence of free product discovered in the ~~secondary~~ containment **sump** or interstitial space of the UST system, other than spill prevention equipment, on an UST site; or

~~(d)~~**(e)** Physical discovery.

~~(35) "Confirmed Release" means chemical(s) of concern in subsurface soil or ground water on an UST site found in concentrations above the action levels specified in paragraph (J) of this rule and confirmed through laboratory analysis of samples during:~~

~~(a) A closure assessment conducted pursuant to rule 1301:7-9-12 of the Administrative Code; or~~

~~(b) A Site Check conducted pursuant to paragraph (F)(3) of this rule.~~

(36) "Voluntary corrective action" means any and all corrective action undertaken by a person who is not an owner or operator, or otherwise potentially liable for the costs of corrective action pursuant to section 3737.89 of the Revised Code for the purpose of meeting applicable standards established by this rule.

(D) Reporting of releases**,** ~~and~~ suspected releases**, and confirmed releases**.

~~(1)~~ Owners and operators shall report a **release, a** suspected release**, or a confirmed release** to the state fire marshal and the local fire department within twenty-four hours of discovery by the owners or operators.

~~(2) Owners and operators shall report a release to the state fire marshal and the local fire department within twenty-four hours of discovery by the owners or operators.~~

(E) Reporting and cleanup of spills and overfills.

If a spill or overfill occurs while transferring or attempting to transfer petroleum product into an UST system, one of the following activities must be conducted:

(1) Spills and overfills of petroleum product that consist of more than twenty-five gallons of petroleum product shall be reported by the owners or operators to the state fire marshal and the local fire department within twenty-four hours of discovery. Owners and operators shall immediately contain to the extent practicable and immediately clean-up the spill or overfill. Owners and operators shall perform a Site Check in accordance with paragraph (F)(3) of this rule.

(2) If the spill or overfill of petroleum products does not enter a nearby surface water body, stormwater system, monitoring well or observation well, and no more than twenty-five gallons of petroleum product has been released to the environment, owners and operators shall immediately contain and clean up the spill or overfill to pre-release conditions. If the clean-up is accomplished within twenty-four hours, then no further corrective action activities shall be required and the owner and operator do not need to report the spill or overfill to the state fire marshal. If the clean-up is not completed within twenty-four hours, owners and operators shall immediately notify the state fire marshal and the local fire department and perform a Site Check in accordance with paragraph (F)(3) of this rule.

(3) If the spill or overfill of petroleum product of any amount enters a nearby surface water body, stormwater system, monitoring well or observation well, owners and operators shall immediately contain to the extent practicable and immediately clean-up the spill or overfill, shall report the spill or overfill to the state fire marshal and the local fire department within twenty-four hours of discovery, and shall perform a Site Check in accordance with paragraph (F)(3) of this rule.

(F) Investigating releases and suspected releases.

The purpose of investigating releases and suspected releases is to determine if a closed-in-place, removed, or existing UST system is leaking or has leaked, to identify the source of a release, to determine whether free product exists, and to determine if concentrations of chemicals of concern in soil and/or groundwater are present above action levels. If concentrations of chemicals of concern in soil and/or groundwater are detected above action levels, the owner and operator shall perform a Tier 1 Source Investigation in accordance with paragraph (H) of this rule.

(1) UST system evaluation.

Owners and operators shall inspect for above ground releases or exposed below ground releases. If testing or other evidence confirms that a release has or continues to occur from an UST system, activities pursuant to paragraph (G)(1) of this rule shall be conducted to stop any further releases into the environment.

(2) Tightness test.

(a) For an existing UST system, where the owner and operator has not identified which component of the UST system has caused the release or suspected release, owners and operators shall conduct a tightness test of the entire UST system, as follows:

(i) The tightness test shall be performed before repairing the UST system.

(ii) The tightness test shall be conducted within seven days of the discovery of the release or suspected release in accordance with paragraph (F) of rule 1301:7-9-07 of the Administrative Code.

(iii) Within twenty-four hours of the receipt of the results, owners and operators shall notify the state fire marshal of the results of the test by telephone, electronic mail or facsimile.

(iv) Within seven days of performing the tightness test, owners and operators shall submit the test results and supporting data, to the state fire marshal on a form prescribed by the state fire marshal.

(b) For an existing UST system where the owner and operator has identified which component of the UST system has caused the release or suspected release, a tightness test of the component shall be conducted. If the owner and operator elects to repair the UST system component before the tightness test is performed or if repairs to the UST system component are necessary in order to achieve a passing tightness test, a Site Check in accordance with section (F)(3) of this rule must be performed in addition to any repair(s) required to mitigate further release of petroleum from the UST system. The tightness test shall be performed as follows:

(i) The tightness test shall be conducted within seven days of the discovery of the release or suspected release in accordance with paragraph (F) of rule 1301:7-9-07 of the Administrative Code.

(ii) Within twenty-four hours of the receipt of the results, owners and operators shall notify the state fire marshal of the results of the test by telephone, electronic mail or facsimile.

(iii) Within seven days of performing the tightness test, owners and operators shall submit the test results and supporting data, to the state fire marshal on a form prescribed by the state fire marshal.

(c) If a release is suspected because of the presence of free product discovered in the ~~secondary~~ containment **sump** or interstitial space of the UST system on an UST site, owners and operators shall:

(i) Conduct a tightness test of the secondary containment or interstitial space of the UST system in accordance with paragraphs (F) of rule 1301:7-9-07 of the Administrative Code to demonstrate that the ~~secondary~~ containment **sump** or interstitial space of the UST system is tight **within seven days of the discovery of free product**.

***(a)* In the case of free product in a containment sump,** ~~The~~ **the** test ~~must~~ **may** be conducted before ~~the secondary containment~~ **or after the repair to the leaking component as long as no repairs or alterations were made to the containment sump prior to the hydrostatic test.** ~~Or~~

***(b)* In the case of free product in the interstitial space, the test must be conducted before** the UST system is repaired ~~and within seven days of discovery of free product~~.

Within twenty-four hours of the receipt of the results **of the test**, owners and operators shall notify the state fire marshal of the results ~~of the test~~ by telephone, electronic mail or

facsimile. Within seven days of performing the ~~tightness~~ test, **owners and operators shall** submit the results **to the state fire marshal**~~,~~ in writing on a form prescribed by the state fire marshal~~, to the state fire marshal~~, or

(ii) Conduct a Site Check pursuant to paragraph (F)(3) of this rule.

(3) Site Check.

(a) Requirements.

Owners and operators shall conduct a Site Check to determine whether subsurface soil or ~~ground water~~ **groundwater** on an UST site have concentrations of chemical(s) of concern above the action levels set forth in paragraph (J) of this rule and must submit a written report consistent with the requirements of one of the options described in paragraph (F)(3)(b) of this rule within ninety days of the following:

(i) ~~a~~ **A** release to the environment as defined in paragraph ~~(C)(25)~~**(C)** of this rule,

(ii) ~~a~~ **A** failed tightness test,

(iii) ~~repairing~~ **Repairing** an UST system before conducting a tightness test as required by paragraph (F)(2) of this rule,

(iv) ~~determining~~ **Determining** that the secondary containment or interstitial space of the UST system is not tight,

(v) ~~physical~~ **Physical** discovery as defined in paragraph ~~(C)(20)~~**(C)(21)** of this rule, or

(vi) ~~the~~**The** occurrence of a spill or overfill requiring a Site Check pursuant to paragraph (E) of this rule.

Notwithstanding paragraph (F)(3)(a)(ii), a Site Check is not required if a release was suspected because of the presence of free product discovered in the ~~secondary~~ containment **sump** or interstitial space of the UST system, the tests conducted pursuant to paragraph (F)(2)(c) of this rule indicate the ~~secondary~~ containment **sump** and/or interstitial space of the UST system meet the performance standards of paragraph (F) of rule 1301:7-9-07 of the Administrative Code, and the owner and operator demonstrate that all product was contained within the ~~secondary~~ containment **sump and/or interstitial space of the UST** system.

(b) Options.

A Site Check to determine the presence and concentrations of chemical(s) of concern in the source area(s) shall consist of one or more of the following:

(i) Conduct a Tier 1 Source Investigation pursuant to paragraph (H) of this rule.

(ii) Closure of an UST system or portion of an UST system that is the potential source of the suspected release in accordance with rule 1301:7-9-12 of the Administrative Code. At least one of the samples required under rule 1301:7-9-12 of the Administrative Code shall be biased towards the areas suspected to have the highest concentration of chemical(s) of concern resulting from the suspected release. The owners and operators shall obtain prior

approval from the state fire marshal for the closure or removal of an UST system or any portion of an UST system if any of the following conditions exist:

(a) The ~~ground water~~ groundwater is known or suspected to contain concentrations of chemical(s) of concern;

(b) Free product is present;

(c) A receptor is known to be impacted by the release;

(d) A surface water body is known to be impacted by the release;

(e) The UST site is in a sole source aquifer ~~sensitive area as defined in rule 1301:7-9-09 of the Administrative Code~~;

(*f*) The UST site is in a ~~Drinking Water Source Protection Area~~ drinking water source protection area; or

(g) A potable well is located on the UST site.

(iii) Collect a minimum of three samples from the native soil immediately below the source of the suspected release.

(a) Samples shall be biased towards the areas suspected to have the highest concentrations of chemical(s) of concern resulting from the suspected release. Samples from each soil boring or excavation shall be screened using headspace techniques and the sample with the highest field screening result from each location shall be submitted for laboratory analysis. If a saturated zone is encountered, a sample of the water shall be collected from that location and submitted for laboratory analysis. All laboratory samples must be analyzed for the appropriate chemical(s) of concern listed in paragraph (H)(1)(c) of this rule.

(b) Owners and operators shall prepare a site check report for the state fire marshal, which shall contain, at a minimum, a description of the nature and location of the suspected release, the type and location of samples collected, sampling methodologies and preservation techniques, soil boring logs, chain-of-custody~~(s)~~ forms and laboratory analytical results. The letter report shall be submitted to the state fire marshal within ninety days of a failed tightness test, determining that the ~~secondary~~ containment sump and/or interstitial space of the UST system is not tight, physical discovery or the occurrence of a spill or overfill as described in paragraph (E) of this rule.

(*c*) Owners and operators must obtain prior approval from the state fire marshal to conduct activities pursuant to this option, if any of the conditions in paragraphs (F)(3)(b)(ii)(*a*) to (F)(3)(b)(ii)(*g*) of this rule exist.

(c) Release determination.

As part of a Site Check conducted pursuant to paragraph (F)(3) of this rule, owners and operators shall determine the appropriate action levels for an UST site using the procedures set forth in paragraphs (H)(2) and (J) of this rule. If concentrations of chemical(s) of concern

are at or below the appropriate action levels, then no further action is required. If concentrations of chemical(s) of concern at any location on an UST site, evaluated pursuant to paragraphs (F)(3)(b)(ii) and (F)(3)(b)(iii) of this rule, are above the action levels for an UST site, owners and operators shall conduct a Tier 1 Source Investigation pursuant to paragraph (H) of this rule.

(G) Immediate corrective actions.

(1) Mitigating releases from UST systems.

If testing or other evidence confirms that a release has occurred or continues to occur from an UST system, the owners and operators shall perform all of the following actions within twenty-four hours of discovery of the release:

(a) Take immediate action to prevent any further release of petroleum from an UST system into the environment, including removal of petroleum from an UST system as necessary to prevent further release into the environment;

(b) Inspect for above ground releases or exposed below ground releases and take steps to prevent further migration of such releases into surrounding soil, sewers, surface water, and ~~ground water~~ groundwater through the use of adsorbent pads, adsorbent booms, dikes, siphon dams and the like;

(c) Continue to monitor and mitigate any additional fire, health, and safety hazards posed by vapors or petroleum products that have migrated to subsurface structures, such as basements, sewers, or the like;

(d) Manage excavated soil containing concentrations of chemical(s) of concern in a manner that complies with applicable state and local requirements;

(e) If a receptor, as defined pursuant to paragraph (C) of this rule, is known to be impacted by a release, the owners and operators shall immediately identify and mitigate all fire, explosion, vapor and safety hazards and notify the state fire marshal within twenty-four hours, by telephone, electronic mail or facsimile, after starting such activities; and

(f) If a release is suspected to impact a drinking water well, owners and operators shall, within three days of discovery, have the drinking water well tested for the appropriate chemical(s) of concern listed in Table 1 of paragraph (H)(1)(c) of this rule. Within twenty-four hours of receipt of the test results, owners or operators shall notify the state fire marshal of the results by telephone, electronic mail or facsimile. Within seven days of receiving the analytical results, owners and operators shall, submit the written results to the state fire marshal.

(2) Immediate corrective action report.

Owners and operators shall submit a written report on a form prescribed by the state fire marshal within twenty days of starting any immediate corrective actions. At a minimum, the immediate corrective action report shall contain the following information:

(a) The date and time the release was discovered;

(b) The addresses and locations of buildings, sewers, surface water bodies and the like affected by

the release;

(c) An overview of activities leading to the discovery of free product;

(d) The type and amount of product released;

(e) A description of the UST systems and operational status;

(f) A description of all completed and planned immediate corrective actions;

(g) The amount and disposition of any materials generated (e.g., soil and liquids), including any supporting documentation (e.g., copies of disposal receipts); and

(h) Copies of site maps, plans and photographs and other information that may assist in evaluating/investigating the release.

(3) Free product removal and reporting.

Where free product is present, owners and operators shall perform all of the following activities:

(a) Immediately implement a free product recovery program that removes free product to the maximum extent practicable, at a minimum on a monthly basis, while continuing other actions required by this rule. In meeting the requirements of this paragraph, the owners and operators must use recovery techniques that:

(i) Remove free product in a manner that minimizes the spread of chemical(s) of concern into previously unimpacted zones and uses recovery techniques appropriate to the hydrogeologic conditions at an UST site. The owners and operators shall collect and dispose of recovered product in compliance with applicable federal, state and local laws; and

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

(b) Owners and operators shall notify the state fire marshal by telephone, electronic mail or facsimile within twenty-four hours of starting free product removal activities.

(c) Owners and operators shall submit a written report on a form prescribed by the state fire marshal, on a monthly basis until free product **recovery activities have been terminated in accordance with paragraph (G)(3)(f) of this rule** ~~**has been removed to the maximum extent practicable**~~. At a minimum, the free product recovery reports shall contain the following information:

(i) The name, address and facility identification number of an UST site;

(ii) Details of the free product recovery system (i.e. drawings, discharge locations, operations);

(iii) A scaled site map which accurately depicts the locations of all current and historical underground storage tank systems, property boundaries, street locations, above ground structures, underground utilities, and on-site potable wells, soil borings and monitoring

wells;

(iv) Copies of installation, operation, treatment and discharge permits granted;

(v) A discussion of any free product recovery system malfunctions, if applicable;

(vi) The product thickness in wells, bore holes and excavations;

(vii) The gallons and type of free product recovered each month and to date;

(viii) The gallons of water recovered each month and to date;

(ix) The disposition of recovered free product and water; and

(x) A description of any changes or modifications to the free product recovery system.

[Comment: Items (ii) through (iv) need only be submitted with the initial monthly free product recovery report]

(d) If a malfunction in a free product recovery system ~~can not~~ **cannot** be repaired within twenty-four hours, owners and operators shall immediately report the malfunction to the state fire marshal by telephone, electronic mail or facsimile. The malfunction shall be corrected and the system placed back into service as soon as technically feasible.

(e) If free product is present one year after initiating free product recovery activities, the state fire marshal may require a written re-evaluation of recovery technique(s). The re-evaluation shall include a discussion of the reliability, effectiveness, cost and time needed for completing free product recovery.

(f) Free product removal activities may be terminated once free product **is a thickness of less than 0.01 feet for three consecutive months or as otherwise directed by the state fire marshal**~~, as defined in paragraph (C) of this rule, is no longer present on and off-site for three consecutive months~~. The state fire marshal shall be notified~~, in writing, within thirty days~~ of termination of free product recovery activities **on a form prescribed by the state fire marshal**.

(g) With prior approval from the state fire marshal, free product removal activities may be terminated once free product, as defined in paragraph (C) of this rule, has been removed to the maximum extent practicable **as determined by the state fire marshal**.

(h) With prior approval from the state fire marshal, owners and operators may submit the written report described in paragraph (G)(3)(c) of this rule to the state fire marshal on a quarterly basis ~~until free product has been removed to the maximum extent practicable~~.

(H) Tier 1 Source Investigation.

The purpose of the Tier 1 Source Investigation is to determine the concentrations of chemical(s) of concern in the source area(s) or to investigate a release or suspected release pursuant to paragraph (F)(3)(b)(i) of this rule or a confirmed release as defined in paragraph (C) of this rule. The Tier 1 Source Investigation shall consist of all of the following:

(1) Source Investigation.

(a) Potential source(s).

Identify the potential source(s). At minimum, the following potential source(s) located on an UST site shall be evaluated to determine the location of potential source area(s):

(i) Existing, abandoned or removed underground storage tanks;

(ii) Existing, abandoned or removed piping and dispenser areas; and

(iii) Areas of known or suspected surface spills of petroleum.

(b) Potential source area(s).

Identify the location of the potential source area(s). Potential source area(s) shall be identified based on the knowledge of the known release, the location of identified potential source(s) through field screening methods or a combination of these.

(c) Chemical(s) of concern.

The chemical(s) of concern shall be identified based on Table 1 using the following five analytical groups:

(i) Analytical Group 1 is for light distillate products including unleaded gasoline, leaded gasoline**, gasoline blended with alcohol, racing fuel,** and aviation gasoline;

(ii) Analytical Group 2 is for middle distillate products including diesel, **biodiesel blended with diesel,** light fuel oils, stoddard solvents, mineral spirits, kerosene, and jet fuels;

(iii) Analytical Group 3 is for heavy petroleum distillate products including, but not limited to, lubricating and hydraulic oils;

(iv) Analytical Group 4 is for used oil; and

(v) Analytical Group 5 is for unknown petroleum products or petroleum products other than those listed in analytical groups 1, 2, 3 and 4. Additional chemical(s) of concern and analytical methods must be selected, as appropriate, based on reasonably available information related to the product stored, including additives, impurities and degradation products. In addition, chemical(s) of concern should be selected based on their toxicity, mobility, and persistence in the environment. The owners and operators shall consult with the state fire marshal for the appropriate chemical(s) of concern for products not in analytical group 1, 2, 3 and 4.

Table 1
Selected Chemical(s) of Concern

	Analytical Group Number	1	2	3	4	5	Analytical Methods[7]	
		Light Distillates	Middle Distillates	Heavy Distillates	Used Oil	Unknowns & Others	**Soil ****[4]**	~~Ground Water~~ **Groundwater**
	Chemical							
Aromatics	Benzene	x	x		x		8021 or 8260	8021 or 8260
	Toluene	x	x		x			
	Ethylbenzene	x	x		x			
	o, m and p-Xylenes	x	x		x			
	Naphthalene	**x**			**x**			
	1,2,4-Trimethylbenzene	**x**			**x**			
Additives	Methyl tertiary-butyl ether (MTBE)	x			x		8021 or 8260	8021 or 8260
	1,2-Dibromoethane (EDB)[5,6]	**x**			**x**		**8260**	**8011**
	1,2-Dichloroethane (EDC)[5,6]	**x**			**x**		**8260**	**8260**
Polynuclear Aromatics	Benzo(a)anthracene		x	x	x		8270, 8310	8270, 8310
	Benzo(a)pyrene		x	x	x			
	Benzo(b)fluoranthene		x	x	x			
	Benzo(k)fluoranthene		x	x	x			
	Chrysene		x	x	x			
	Dibenz(a,h)anthracene		x	x	x			
	Indeno(1,2,3-c,d)pyrene		x	x	x			
	Naphthalene		x	x	x			
Chlorinated Hydrocarbons	Volatile Organic Hydrocarbons				x		8260	8260
Total Petroleum Hydrocarbons~~*~~[1]	TPH (C6 – C12)	x			x		8015	N/A
	TPH (C10 – C20)		x		x			
	TPH (C20 – C34)			x	x			
	Varies based on UST contents~~**~~[2]			x	x	~~***~~[3]		

~~*~~ **1** TPH analysis is not required for ~~ground water~~ **groundwater** samples.
~~**~~ **2** Additional chemicals of concern should be based on ~~Material~~ Safety and Data Sheets ~~(MSDS)~~ **(SDS)** and analyzed with an appropriate laboratory test method capable of meeting established target levels.
~~***~~ **3** Refer to paragraph (H)(1)(c)(v).
~~****~~ **4** Soil analytical results shall be reported on a dry weight basis.
5 EDB and EDC shall be analyzed for automotive gasoline USTs that were in service prior to January 1, 1996.
6 EDB and EDC shall be analyzed for all USTs containing aviation gasoline, racing fuel, and used oil.
7 Alternate laboratory methods will be considered if the methods meet the quality control, performance, and method detection level requirements.

(d) Subsurface Investigation.

(i) Objectives.

The subsurface investigation shall be conducted to collect the data necessary to complete the Tier 1 Source Investigation and to:

(a) Determine the presence and concentrations of chemical(s) of concern in the source area(s) for comparison to action levels in accordance with paragraphs (J)(2) and (J)(3) of this rule; and

(b) Determine the geologic, hydrogeologic and physical characteristics of an UST site and the surrounding area that may influence the migration and transport of chemical(s) of concern. This determination shall include, at a minimum, the following information:

(i) The direction and gradient of ~~**ground water**~~ **groundwater** flow (if ground water is encountered);

(ii) A description of faults, fissures, fractures, or other geologic transport routes;

(iii) A description of the soil type(s);

(iv) The depth to ~~**ground water**~~ **groundwater**; and

(v) The location and influence of man-made structures (e.g., sewers, water lines, etc).

(ii) Investigation of source area(s).

The presence and concentrations of chemical(s) of concern in the source area(s) shall be determined in accordance with all of the following:

(a) A minimum of three soil borings shall be located in the source area(s) to determine the concentration of chemical(s) of concern in soil. If the soil borings cannot be located in the source area(s), the soil borings shall be biased to the area of highest suspected concentration of chemical(s) of concern.

(b) A minimum of three ~~**ground water**~~ **groundwater** monitoring wells shall be located in the source area(s) to determine the concentration of chemical(s) of concern in ~~**ground water**~~ **groundwater**. If the monitoring wells cannot be located in the source area(s), the monitoring wells shall be biased to the area of highest suspected concentration of chemical(s) of concern.

(c) Non-intrusive or indirect field testing may be used to assist in selecting soil boring or monitoring well locations, but these techniques shall not be used to demonstrate that concentrations of chemical(s) of concern are below applicable action levels. Data collection shall consider the likely distribution and temporal variations of the chemical(s) of concern in the environmental media and the physical parameters necessary to determine hydrologic and geologic properties of environmental media.

(d) Soil borings and ~~**ground water**~~ **groundwater** monitoring wells shall be installed as

follows:

(i) Soil borings shall extend to the upper saturated zone, bedrock, or fifty feet, whichever shall be encountered first. If ~~ground water~~ groundwater is known to contain concentrations of chemical(s) of concern, borings shall extend to such ~~ground water~~ groundwater regardless of depth. If bedrock is encountered, then soil borings and monitoring wells shall be installed as follows:

(A) If chemical(s) of concern in soil exceed soil-to-drinking water leaching action levels, a minimum of one monitoring well must be installed in the source area(s) to a maximum depth of fifty feet;

(B) If the saturated zone is known to contain concentrations of chemical(s) of concern, a minimum of one monitoring well must be installed in the source area(s) regardless of depth; and

(C) If the bedrock is a known drinking water source within the surrounding area, the state fire marshal reserves the right to request a bedrock monitoring well at depths greater than fifty feet;

(ii) Soil borings shall be continuously sampled and boring logs shall be prepared describing the stratigraphy from each soil boring location;

(iii) Boring logs shall be prepared and soil encountered during drilling shall be characterized in accordance with American Society of Testing and Materials (ASTM) D2488-00 (Standard Practice for Description and Identification of Soils/Visual-Manual Procedures) or the Unified Soil Classification System (USCS);

(iv) Data collection for monitoring wells shall include the depth to free product, free product thickness, depth of water below the top of the casing, and the elevation of the top of the casing;

(v) ~~Ground water~~ Groundwater monitoring wells shall be extended to the bottom of the saturated zone or a minimum of five feet into the saturated zone, whichever is less. ~~ground water~~ groundwater monitoring wells shall be screened to accommodate seasonal fluctuations in the ~~ground water~~ groundwater table. If the chemical and/or physical properties indicate the potential for downward migration of chemical(s) of concern, the state fire marshal may require alternate monitoring well installation protocol; and

(vi) Monitoring wells shall be clearly labeled with an identification that corresponds to the identifications submitted on site maps.

(e) ~~Ground water~~ Groundwater samples shall be collected from each monitoring well and analyzed, in an accredited laboratory, for the appropriate chemical(s) of concern listed in Table 1 of paragraph (H)(1) (c) of this rule.

(f) Soil samples from soil borings shall be collected and analyzed, in an accredited laboratory and reported on a dry weight basis, for the appropriate chemical(s) of concern listed in Table 1 of paragraph (H)(1)(c) of this rule. Soil samples shall be

screened using headspace techniques. Soil samples shall be submitted for laboratory analysis using the following criteria:

(i) If ~~ground water~~ groundwater is encountered, the sample above the soil/water interface exhibiting the highest headspace vapor concentration and the sample immediately above the soil/~~ground water~~ groundwater interface, as encountered during drilling, shall be submitted for laboratory analysis. If the highest headspace reading is the sample immediately above the soil/~~ground water~~ groundwater interface, the sample with the highest and the second highest headspace reading above the soil/~~ground water~~ groundwater interface shall be submitted for laboratory analysis.

(ii) If ~~ground water~~ groundwater is encountered and no soil samples exhibit headspace readings above background levels, a sample shall be taken from immediately above the soil/water interface, as encountered during drilling, and submitted for laboratory analysis.

(iii) If no ~~ground water~~ groundwater is encountered, the sample with the highest headspace readings and the sample from the bottom of the boring shall be submitted for laboratory analysis.

(iv) If no ~~ground water~~ groundwater is encountered and no soil samples exhibit headspace readings above background levels, a sample shall be taken from the bottom of the boring and submitted for laboratory analysis.

(iii) ~~Ground water~~ Groundwater determination.

A determination of the existence of ~~ground water~~ groundwater shall be made by determining if a saturated zone has sufficient ~~ground water~~ groundwater yield to meet the minimum criteria for being ~~ground water~~ groundwater. For purposes of determining if the encountered saturated zone is ~~ground water~~ groundwater:

(a) Assume that the encountered saturated zone is ~~ground water~~ groundwater; or

(b) Demonstrate, through appropriate field methods, that the encountered saturated zone is not ~~ground water~~ groundwater as defined in paragraph (C) of this rule.

(2) Action level determination**.**

Upon completion of a Site Check pursuant to paragraph (F)(3) of this rule or a Tier 1 Source Investigation pursuant to paragraph (H) of this rule, owners and operators shall complete a site feature determination in accordance with paragraph (H)(2)(a) of this rule and a points of exposure determination in accordance with paragraph (H)(2)(b) of this rule to determine the appropriate action levels for an UST site pursuant to paragraphs (J)(2) and (J)(3) of this rule.

(a) Site feature determination.

(i) Identify the chemical(s) of concern in accordance with paragraph (H)(1)(c) of this rule.

(ii) For purposes of Site Check, Tier 1 Source Investigation and Tier 1 Delineation as described in paragraph (I) of this rule, the residential exposure scenario shall be used.

(iii) Determine if the saturated zone is ~~ground water~~ groundwater in accordance with paragraph (H)(1)(d)(iii) of this rule. If a determination is not made in accordance with paragraph (H)(1)(d)(iii) of this rule or if a potable well exists on an UST site, then the saturated zone shall be assumed to be ~~ground water~~ groundwater.

(iv) Select a soil class using Table 2 that best represents each pathway to be evaluated utilizing the information obtained ~~during the subsurface investigation conducted~~ pursuant to paragraph ~~(H)(1)(d)(ii)(f)~~ (H)(1)(d)(ii)(d)(ii) and (H)(1)(d)(ii)(d)(iii) of this rule.

(v) Action levels shall be determined by applying the ~~ground water~~ groundwater determination, depth-to-~~ground water~~ groundwater and soil class information to the action level tables in paragraph (J)(3) of this rule. An action level shall be identified for each environmental media and exposure pathway in accordance with paragraph (J)(2) of this rule.

Table 2
Soil Classification

Major Divisions			Letter Symbol	Typical Description	Soil Class
Coarse Grained Soils More than 50% of material is retained on #200 Sieve	Gravel and Gravelly Soils More than 50% of Coarse Fraction Retained on No. 4 Sieve	Clean Gravels (Little or No Fines)	GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines	Class 1
			GP	Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines	
		Gravels with Fines (Appreciable Amount of Fines)	GM	Silty Gravels, Gravel-Sand-Silt Mixtures	
			GC	Clayey Gravels, Gravel-Sand-Clay Mixtures	
	Sand and Sandy Soils More than 50% of Coarse Fraction Passes ~~thru~~ through No. 4 Sieve	Clean Sand (Little or No Fines)	SW	Well-Graded Sands, Gravelly Sands, Little or No Fines	
			SP	Poorly-Graded Sands, Gravelly Sands, Little or No Fines	
		Sands with Fines (Appreciable Amount of Fines)	SM	Silty-Sands, Sand-Silt Mixtures	
			SC	Clayey Sands, Sand-Clay Mixtures	Class 2
Fine Grained Soils More than 50% of material passes ~~thru~~	Silts and Clays Liquid Limit<50		ML	Inorganic Silt and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sand or Clayey Silts with Slight Plasticity	
			CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays	
			OL	Organic Silts and Organic Silty Clays of Low Plasticity	
	Silts and Clays		MH	Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soil	

through #200 Sieve	Liquid Limit>50	CH	Inorganic Clays of High Plasticity, Fat Clays	Class 3
		OH	Organic Clays of Medium to Plasticity, Organic Silts	
Highly Organic Soils		PT	Peat, Humus, Swamp Soil with High Organic Contents	

(b) Point(s) of exposure.

For purposes of a Tier 1 Source Investigation, it is assumed that the point(s) of exposure will be located in the source area(s). Therefore, while movement of chemical(s) of concern outside the property lines of an UST site is not specifically evaluated in a Tier 1 Source Investigation, any identified current or potential future drinking water source in the surrounding area shall be assumed to be within the source area(s). The fate and transport of chemical(s) of concern in ~~ground water~~ groundwater will be evaluated under the Tier 2 Evaluation in paragraph (L) of this rule.

(3) Tier 1 Source Investigation reporting.

(a) Owners and operators shall prepare and submit on a form prescribed by the state fire marshal either a Tier 1 Evaluation report pursuant to paragraph (H)(3)(b) of this rule (if the concentrations of the chemical(s) of concern are below action levels) or a Tier 1 Notification pursuant to paragraph (H)(3)(c) of this rule (if the concentrations of the chemical(s) of concern are above action levels) within ninety days of the occurrence of any of the following:

(i) Receiving analytical results, which exceed action levels, pursuant to paragraph (F)(3)(c) of this rule;

(ii) Electing to conduct corrective actions pursuant to paragraph ~~(B)(2)~~(B)(2)(a) of this rule;

(iii) Electing to conduct a Tier 1 Source Investigation pursuant to (F)(3)(b)(i) of this rule;

(iv) Receiving analytical results, which exceed action levels, from a closure assessment conducted pursuant to paragraph ~~(F)~~(I) of rule 1301:7-9-12 of the Administrative Code; or

(v) ~~Conducting~~ Receiving notice from the state fire marshal to conduct corrective action activities pursuant to paragraph ~~(B)(3)~~(B)(2)(b) of this rule.

(b) If the concentrations of chemical(s) of concern are at or below action levels for all pathways, owners and operators shall submit a Tier 1 Evaluation report on a form prescribed by the state fire marshal limited to the information prescribed in paragraphs (I)(3)(b)(i) and (I)(3)(b)(ii) of this rule.

(c) If the concentrations of chemical(s) of concern are above the action level for one or more exposure pathways, owners and operators shall submit a Tier 1 Notification on a form prescribed by the state fire marshal and conduct a Tier 1 Delineation pursuant to paragraph (I) of this rule. The Tier 1 Notification shall include all of the following information:

(i) Owner and operator information including the following:

(a) Name of the owners and operators;

(b) Address of an UST site; and

(c) Facility identification number.

(ii) A scaled site map which accurately depicts the locations of all known current and historical underground storage tank systems, property boundaries, street locations, above ground structures, underground utilities, on-site potable wells, and the following:

(a) Locations of all soil borings and associated analytical results, including depths at which samples were collected;

(b) Location of all monitoring wells and associated analytical results; and

(c) ~~Ground water~~ Groundwater flow gradient.

(iii) Attachments that include:

(a) Laboratory analytical sheets, including the chain-of-custody form(s);

(b) Soil boring logs/monitoring well construction diagrams that identify the location in decimal degrees accurate to within five feet of the actual location and reported to five decimal places; and

(c) A table which includes the appropriate soil class and action levels for each pathway.

(iv) A description of soil and ~~ground water~~ groundwater sampling procedures.

(I) Tier 1 Delineation.

The purpose of the Tier 1 Delineation is to define the vertical and horizontal extent of chemical(s) of concern in soil and ~~ground water~~ groundwater to the delineation levels (in all directions from the source areas(s)) and to determine the potential drinking water use at the site and surrounding area. A Tier 1 Delineation shall consist of the following:

(1) Assessment and delineation of chemical(s) of concern.

(a) Determine the distribution of chemical(s) of concern in accordance with the following:

(i) The distribution of chemical(s) of concern shall be defined to the delineation levels set forth in paragraph (J)(1) of this rule;

(ii) Soil borings and ~~ground water~~ groundwater monitoring wells shall be installed in accordance with paragraph (H)(1)(d)(ii) of this rule. If bedrock is encountered and concentrations of chemical(s) of concern in soil exceed soil-to-drinking water leaching action levels, a minimum of one monitoring well shall be installed in the source area(s) to ~~ground water~~ groundwater. The state fire marshal reserves the right to request a bedrock monitoring well at depths greater than fifty feet if the bedrock is a known drinking water source within the surrounding area. If any chemical(s) of concern are encountered in ~~ground water~~ groundwater, additional monitoring wells shall extend to

such ~~ground water~~ groundwater:

(iii) Determine the geologic, hydrogeologic and physical characteristics of the UST site and the surrounding area that may influence the migration and transport of chemical(s) of concern. This determination shall include, at a minimum, the following information:

(a) The direction and gradient of ~~ground water~~ groundwater flow, if ~~ground water~~ groundwater is encountered;

(b) A description of faults, fissures, fractures, or other geologic transport routes;

(c) A description of the soil type(s);

(d) The depth to ~~ground water~~ groundwater; and

(e) The location and influence of man-made structures (e.g., sewers, water lines).

(iv) If the determination of the likely distribution of chemical(s) of concern requires off-site access, owners and operators shall use their best efforts to obtain permission to enter such off-site areas to complete the investigations required by this rule. If access cannot be obtained, the owners and operators shall submit notice to the state fire marshal within forty-five days after the owner and operator determines off-site access cannot be obtained. The notice shall describe the efforts taken by the owners and operators to obtain off-site access and the reasons why access could not be obtained. Owners and operators shall take additional action to obtain off-site access if required by the state fire marshal.

(b) Potable well locations.

Identify the source or sources of potable water for the UST site and the surrounding area, including the identification of all public and private drinking water wells and public water supply sources within the surrounding area. The evaluation of potable water supplies shall be based on reasonably available information including, but not limited to, information collected or maintained by the Ohio ~~Environmental Protection Agency~~ environmental protection agency, Ohio ~~Department of Natural Resources~~ department of natural resources, county health departments, and public water supply organizations.

(2) Potential drinking water use.

Determine if ~~ground water~~ groundwater is drinking or non-drinking water by utilizing the information obtained in the Tier 1 Source Investigation and the Tier 1 Delineation. The drinking water use determination shall be conducted in accordance with this paragraph. Evaluation of the drinking water exposure pathway may be conducted during the Tier 2 Evaluation to determine if the pathway is complete.

(a) The current and potential future use of ~~ground water~~ groundwater underlying the UST site and surrounding area shall be used to determine if ~~ground water~~ groundwater underlying the UST site is either a drinking water source or not a drinking water source. During the Tier 1 Delineation, the following assumptions about ~~ground water~~ groundwater shall be made:

(i) The ~~ground water~~ groundwater use to be evaluated shall be the upper most saturated zone underlying the UST site. If any evidence suggests the chemical(s) of concern are

present in the lower saturated zones, they must also be evaluated; and

(ii) Any identified current or potential future drinking water source in the surrounding area shall be assumed to be within the source area(s).

(b) The evaluation of ~~ground water~~ groundwater use underlying the UST site and surrounding area shall be based on reasonably available information including, but not limited to, information collected or maintained by the ~~Bureau of Underground Storage Tank Regulations~~ bureau of underground storage tank regulations, Ohio ~~Environmental Protection Agency~~ environmental protection agency, Ohio ~~Department of Natural Resources~~ department of natural resources (including located and unlocated potable well logs), county health departments, and public water supply organizations.

(c) The ~~ground water~~ groundwater underlying the UST site and surrounding area shall be considered a drinking water source if any of the following apply:

(i) The UST site or surrounding area is located in a ~~Drinking Water Source Protection Area~~ drinking water source protection area as defined by paragraph (C) of this rule.

(ii) The UST site is located in, or within three hundred feet of, a sole source aquifer ~~in a Sensitive Area as defined by rule 1301:7-9-09 of the Administrative Code~~.

(iii) An existing drinking water source in the ~~ground water~~ groundwater is identified within the surrounding area, even if the source is completed into a lower saturated zone than the saturated zone to be evaluated on the UST site. This identification shall include the information required in paragraph (I)(1)(b).

(iv) A surface water body is located within three hundred feet of the UST system.

(d) If the UST site does not meet the drinking water requirements of paragraph (I)(2)(c) of this rule, then ~~ground water~~ groundwater underlying the UST site shall be considered non-drinking water if any of the following apply:

(i) ~~Ground water~~ Groundwater in the upper saturated zone yields less than three gallons per minute;

(ii) ~~Ground water~~ Groundwater in the upper saturated zone has a background level of total dissolved solids of three thousand milligrams per liter or greater;

(iii) The UST site is located in an area where an urban setting designation pursuant to Chapter 3746 of the Revised Code and rules adopted thereunder has been approved by the director of Ohio ~~Environmental Protection Agency~~ environmental protection agency and the owner and operator verifies that the urban setting designation remains protective of the potable use pathway in accordance with rule ~~3745-300-10(D)(3)(b)~~3745-300-10(C)(3)(b) of the Administrative Code;

(iv) No potable wells are located within three hundred feet of the UST site based on a physical survey and an ordinance requires a mandatory tie-in to a municipal water system for all properties in the surrounding area;

(v) No potable wells are located within three hundred feet of the UST site based on a physical

survey and an ordinance prohibits the installation of potable water wells at all properties within the surrounding area;

(vi) No potable wells are located within three hundred feet of the UST site based on a physical survey and ~~100~~ one hundred percent of the properties within three hundred feet of the UST site are connected to a municipal water source or a municipal source is readily available; or

(vii) The UST site is greater than five acres, and at least one of the conditions apply:

(*a*) No potable wells are located within three hundred feet of the UST system based on a physical survey and an ordinance requires a mandatory tie-in to a municipal water system for all properties in the surrounding area;

(*b*) No potable wells are located within three hundred feet of the UST system based on a physical survey and an ordinance prohibits the installation of potable water wells at all properties within the surrounding area; or

(*c*) No potable wells are located within three hundred feet of the UST system based on a physical survey and one hundred percent of the properties within three hundred feet of the UST system are connected to a municipal water source or a municipal source is readily available.

(e) If ~~ground water~~ groundwater is not drinking water pursuant to paragraph (I)(2)(c) of this rule and does not meet one of the criteria in paragraph (I)(2)(d) of this rule, then ~~ground water~~ groundwater shall be considered drinking water.

(f) Action levels shall be determined by applying the ~~ground water~~ groundwater determination, depth-to-~~ground water~~ groundwater and soil class information to the action level tables in paragraph (J)(3) of this rule. An action level shall be identified for each environmental media and exposure pathway in accordance with paragraph (J)(2) of this rule.

(3) Tier 1 Source Investigation and Delineation reporting (Tier 1 Investigation Report).

The purpose of the Tier 1 Investigation Report is to summarize the Tier 1 Source Investigation and Tier 1 Delineation activities conducted pursuant to paragraphs (H) and (I) of this rule.

(a) Owners and operators shall prepare and submit a Tier 1 Investigation Report on a form prescribed by the state fire marshal pursuant to paragraph (J) of this rule, within one year of the occurrence of any of the following:

(i) Receiving analytical results, which exceed action levels, while conducting investigations pursuant to paragraph (F)(3)(b) of this rule;

(ii) Electing to conduct corrective actions pursuant to paragraph (B)(2)(a) of this rule;

(iii) Receiving analytical results, which exceed action levels, from a closure assessment conducted pursuant to paragraph ~~(F)~~(I) of rule 1301:7-9-12 of the Administrative Code; or

(iv) ~~Conducting~~ Receiving notice from the state fire marshal to conduct corrective action

activities pursuant to paragraph ~~(B)(3)~~**(B)(2)(b)** of this rule.

(b) The Tier 1 Investigation Report shall include the following information:

(i) A brief summary of any immediate corrective actions, including free product removal, soil excavation, and any actions taken to abate vapors or address safety concerns, including date(s) of each action, methods and techniques used, amount of material recovered, and current or most recent UST site conditions.

(ii) A summary of the Tier 1 Source Investigation activities pursuant to paragraph (H) of this rule and the Tier 1 Delineation activities pursuant to (I)(1) of this rule which includes the following information:

(a) A brief description of the UST site and surrounding area, including:

(i) The applicable 7.5 minute United States ~~**Geological Survey**~~ **geological survey** (USGS) quadrangle map including:

(A) UST site location, map number, longitude and latitude; and

(B) Location of the USGS quadrangle within the state boundaries.

(b) Underground storage tank information that includes current and historical use of the UST system, age of the UST system, materials of construction, size, contents, location and available precision test results;

(c) A site map which accurately depicts the locations of ~~**known**~~ **known** current and historical underground storage tank system(s), property boundaries, street locations, above ground structures, underground utilities, on-site potable well(s) and soil boring(s) and/or monitoring well(s) locations; and

(d) A summary of the data collection activities which includes, at a minimum, the following information:

(i) A summary of the rationale for sampling and testing locations;

(ii) A description of the field methodologies employed including, instrument calibration techniques and the make and model of equipment used;

(iii) Drilling logs and well construction diagrams which include:

(A) Type of sampler used (e.g., Shelby tube, California sampler, split-spoon);

(B) The organic vapor concentrations as determined by field screening techniques;

(C) A description of the presence of free product and its characteristics;

(D) Depth at which saturated conditions were first encountered during drilling and the depth of the static water level;

(E) A complete description of the soil sample for each interval including;

(1) The color and moisture content;

(2) The USCS classification;

(3) The gradation consistency;

(4) A description of horizontal and/or vertical fracturing of bedrock encountered while drilling;

(5) The type and description of bedrock with differentiation between weathered and competent bedrock;

(6) A description of any voids or significant pressure changes observed in bedrock drilling;

(7) A graphic illustration of each sample interval.

(8) A description of which soil sample interval(s) were sent to the laboratory for analysis; and

(9) Amount of sample recovery for each interval in units of feet; and

(F) Coordinates of the boring location in decimal degrees accurate to within five feet of the actual location and reported to five decimal places.

(iv) Monitoring well development and sampling logs. The number and quantity of well purging volumes, date, sample appearance, time and duration of collection and development shall be documented.

(v) Depth-to-fluid, depth-to-water, free product thickness measurements, and top-of-casing and ~~**ground water**~~ **groundwater** elevations in tabular form for each well. When available, include historical data in the table and reference the source(s) of all information presented.

(vi) A ~~**ground water**~~ **groundwater** elevation contour map using all relevant monitoring wells to establish ~~**ground water**~~ **groundwater** contour and flow direction, the date that ~~**ground water**~~ **groundwater** measurements were collected and justification for the exclusion of specific monitoring wells in determination of flow direction, if applicable.

(vii) Analytical laboratory results including all of the following:

(A) Laboratory analyses in tabular form, by environmental medium, including applicable action levels. Present current results along with historical results, when available. Indicate sample collection date(s) and reference source(s) of all information presented. All tables shall include the corresponding method detection limit for each analysis that was below detection limits;

(B) Analytical results, quality assurance/quality control (QA/QC) procedures and

data quality objectives including, without limitation, all laboratory certificates of analysis (data sheets), completed chain-of-custody forms indicating soil boring and/or monitoring well numbers and laboratory sample numbers; and

(C) Laboratory analysis summary form as prescribed by the state fire marshal.

(viii) Chemical(s) of concern concentration maps for soil in units of milligrams per kilogram (mg/kg) and ~~ground water~~ groundwater in units of milligrams per liter (mg/l). Maps shall include the location of sampling points, the depth of each soil sample interval and the location of source area(s). Maps shall include historical soil and ~~ground water~~ groundwater results for the release being investigated. Maps that include ~~ground water~~ groundwater data may be limited to the most recent four sampling events unless directed by the state fire marshal.

(ix) Documentation used to determine if the saturated zone is ~~ground water~~ groundwater.

(iii) Documentation justifying the potential drinking water use determination made pursuant to paragraph (I)(2) of this rule.

(iv) Documentation regarding off-site access pursuant to paragraph (I)(1)(a)(iv) of this rule, as appropriate.

(v) Documentation regarding the determination of action levels by applying the information on the potential drinking water use determination and soil class to the appropriate tables in paragraph (J)(3) of this rule.

(4) Tier 1 Investigation decision.

Upon submission of the Tier 1 Investigation report, the state fire marshal will evaluate the submitted information for completeness.

(a) If the concentrations of all chemical(s) of concern are at or below action levels determined in accordance with paragraph (I)(2)(f) of this rule for all applicable pathways, then no further action is required.

(b) If the concentrations of a particular chemical(s) of concern are at or below the action level(s) determined in accordance with paragraph (I)(2)(f) of this rule, then no further evaluation is necessary for that chemical of concern and for the corresponding exposure pathway.

(c) If the concentrations of chemical(s) of concern are above applicable action level(s) determined in accordance with paragraph (I)(2)(f) of this rule, and upon approval of the completeness of the Tier 1 Delineation, the owners and operators shall conduct one or a combination of the following:

(i) Conduct an Interim Response Action pursuant to paragraph (K) of this rule;

(ii) Conduct a Tier 2 Evaluation pursuant to paragraph (L) of this rule; or

(iii) Submit a Remedial Action Plan pursuant to paragraph (N) of this rule.

(J) Action and delineation levels.

(1) Delineation levels.

The delineation levels in soil and ~~ground water~~ groundwater for chemical(s) of concern shall be as follows:

Chemicals of Concern	Groundwater (mg/l)	Soil (mg/kg)
Benzene	0.417	1.67
Toluene	217	1,240
Ethylbenzene	41.6	406
o, m and p-xylenes	10	42.7
Naphthalene	1.68	52.7
1,2,4-Trimethylbenzene	0.417	5.35
Methyl tertiary-butyl ether (MTBE)	134	150
1,2-Dibromoethane (EDB)	0.09	0.154
1,2-Dichloroethane (EDC)	0.59	1.01
Benzo(a)anthracene	20.6	12
Benzo(a)pyrene	18.3	1.2
Benzo(b)fluoranthene	162	12
Benzo(k)fluoranthene	169	120
Chrysene	681	1,200
Dibenz(a,h)anthracene	22.5	1.2
Indeno(1,2,3 –c,d)pyrene	112	12
Light Distillate Fraction (C6-C12)	N/A	1,000
Middle Distillate Fraction (C10-C20)	N/A	2,000
Heavy Distillate Fraction (C20-C34)	N/A	5,000

~~Chemicals of Concern~~	~~Ground water (mg/l)~~	~~Soil (mg/kg)~~
~~Benzene~~	~~0.428~~	~~1.04~~
~~Toluene~~	~~15.5~~	~~61.3~~
~~Ethylbenzene~~	~~38.1~~	~~199~~
~~o, m and p-xylenes~~	~~10~~	~~15.7~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~1,240~~	~~1,240~~
~~Benzo(a)anthracene~~	~~66.7~~	~~11~~
~~Benzo(a)pyrene~~	~~12.7~~	~~1.1~~
~~Benzo(b)fluoranthene~~	~~6.72~~	~~11~~
~~Benzo(k)fluoranthene~~	~~2380~~	~~110~~
~~Chrysene~~	~~715~~	~~1,100~~
~~Dibenz(a,h)anthracene~~	~~35.3~~	~~1.1~~

~~Indeno(1,2,3-c,d)pyrene~~	~~202~~	~~11~~
~~Naphthalene~~	~~2.22~~	~~54~~

(2) Action levels.

(a) If ~~ground water~~ groundwater is determined to be a drinking water source in accordance with paragraph (I)(2)(c) or (I)(2)(e) of this rule, then the maximum concentrations of each chemical of concern in soil and ~~ground water~~ groundwater, for the corresponding soil type, shall be compared to the applicable action levels in paragraph (J)(3) of this rule, for the following pathways:

(i) ~~Ground water~~ Groundwater ingestion;

(ii) Direct contact with soil;

(iii) Soil to drinking water leaching;

(iv) Soil to indoor air;

(v) ~~Ground water~~ Groundwater to indoor air;

(vi) ~~Ground water~~ Groundwater to outdoor air; and

(vii) Soil to outdoor air.

(b) If ~~ground water~~ groundwater is determined to be non-drinking water in accordance with paragraph (I)(2)(d), then the maximum concentrations of each chemical of concern in soil and ~~ground water~~ groundwater, for the corresponding soil class, shall be compared to the applicable action levels in paragraph (J)(3) of this rule, for the following tables:

(i) Direct contact with soil;

(ii) Soil to non-drinking water leaching;

(iii) Soil to indoor air;

(iv) ~~Ground water~~ Groundwater to indoor air;

(v) ~~Ground water~~ Groundwater to outdoor air; and

(vi) Soil to outdoor air.

(c) If no ~~ground water~~ groundwater has been encountered as defined in paragraph ~~(C)(12)~~(C) of this rule, then the maximum concentrations of each chemical of concern in soil, for the corresponding soil class, shall be compared to the applicable action levels in paragraph (J)(3) of this rule, for the following pathways:

(i) Direct contact with soil;

(ii) Soil to indoor air; and

(iii) Soil to outdoor air.

(3) Action level look-up tables.

(a) The action levels in ~~ground water~~ groundwater for the ~~ground water~~ groundwater ingestion pathway for chemical(s) of concern shall be as follows:

~~Ground water~~ Groundwater Ingestion Action Levels

Chemicals of Concern	Action Levels
Benzene	0.005
Toluene	1
Ethylbenzene	0.7
o, m and p-Xylenes	10
Naphthalene	0.0014
1,2,4-Trimethylbenzene	0.015
Methyl tertiary-butyl ether (MTBE)	0.12
1,2-Dibromoethane	0.00005
1,2-Dichloroethane	0.005
Benzo(a)anthracene	0.00092
Benzo(a)pyrene	0.0002
Benzo(b)fluoranthene	0.00092
Benzo(k)fluoranthene	0.0092
Chrysene	.092
Dibenz(a,h)anthracene	0.000092
Indeno(1,2,3-c,d)pyrene	0.00092

~~Chemicals of Concern~~	~~Action Levels~~
~~Benzene~~	~~0.005~~
~~Toluene~~	~~1~~
~~Ethylbenzene~~	~~0.7~~
~~o, m and p-Xylenes~~	~~10~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~0.04~~
~~Benzo(a)anthracene~~	~~0.00026~~
~~Benzo(a)pyrene~~	~~0.0002~~
~~Benzo(b)fluoranthene~~	~~0.00017~~
~~Benzo(k)fluoranthene~~	~~0.0017~~
~~Chrysene~~	~~.047~~
~~Dibenz(a,h)anthracene~~	~~0.0002~~
~~Indeno(1,2,3-c,d)pyrene~~	~~0.00022~~
~~Naphthalene~~	~~0.14~~

All chemical concentrations expressed in milligrams per liter (mg/L).

(b) The action levels in ~~ground water~~ groundwater for the ~~ground water~~ groundwater to indoor air pathway for chemical(s) of concern shall be as follows for the applicable soil type and depth to ~~ground water~~ groundwater:

Soil Class 1

Chemicals of Concern	Groundwater to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.
Benzene	4.17	26.1	4.18	26.1	4.24	26.5	4.31	27.0
Toluene	2,170	35,200	2,170	35,300	2,210	35,800	2,240	36,400
Ethylbenzene	416	6,760	417	6,760	423	6,860	430	6,980
o, m and p-Xylenes	50.7	822	50.7	823	51.5	835	52.4	849
Naphthalene	16.8	105	16.8	105	17.1	107	17.4	109
1,2,4 - Trimethylbenzene	4.17	67.6	4.17	67.6	4.23	68.7	4.31	69.8
MTBE*	1,340	8,360	1,340	8,370	1,360	8,500	1,380	8,660
1,2 – Dibromoethane (EDB)	0.908	5.68	0.909	5.69	0.923	5.78	0.940	5.88
1,2 – Dichloroethane (EDC)	5.90	36.9	5.91	37.0	6.00	37.6	6.11	38.2
Benzo(a)anthracene	206	1,290	206	1,290	210	1,310	214	1,340
Benzo(a)pyrene	183	1,140	183	1,150	191	1,190	200	1,250
Benzo(b)fluoranthene	1,620	10,100	1,620	10,200	1,680	10,500	1,750	11,000
Benzo(k)fluoranthene	1,690	10,600	1,690	10,600	1,760	11,000	1,830	11,500
Chrysene	6,810	42,600	6,820	42,700	6,970	43,600	7,150	44,700
Dibenz(a,h)anthracene	225	1,410	226	1,420	244	1,520	264	1,650
Indeno(1,2,3-c,d)pyrene	1,120	7,030	1,130	7,040	1,150	7,220	1,190	7,430

~~Chemicals of Concern~~	~~Ground Water to Indoor Air~~							
	~~<15 Feet~~		~~15-30 Feet~~		~~31-50 Feet~~		~~>50 Feet~~	
	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~
~~Benzene~~	~~4.28~~	~~26.80~~	~~4.28~~	~~26.80~~	~~4.34~~	~~27.20~~	~~4.42~~	~~27.70~~
~~Toluene~~	~~155.00~~	~~2,510.00~~	~~155.00~~	~~2,520.00~~	~~157.00~~	~~2,550.00~~	~~160.00~~	~~2,600.00~~
~~Ethylbenzene~~	~~381.00~~	~~6,180.00~~	~~381.00~~	~~6,180.00~~	~~387.00~~	~~6,270.00~~	~~393.00~~	~~6,380.00~~
~~o, m and p-Xylenes~~	~~41.30~~	~~670.00~~	~~41.30~~	~~671.00~~	~~41.90~~	~~681.00~~	~~42.70~~	~~692.00~~
~~MTBE*~~	~~12,400.00~~	~~200,000.00~~	~~12,400.00~~	~~201,000.00~~	~~12,600.00~~	~~204,000.00~~	~~12,800.00~~	~~208,000.00~~
~~Benzo(a)anthracene~~	~~667.00~~	~~4,170.00~~	~~668.00~~	~~4,180.00~~	~~683.00~~	~~4,270.00~~	~~701.00~~	~~4,390.00~~
~~Benzo(a)pyrene~~	~~127.00~~	~~794.00~~	~~127.00~~	~~796.00~~	~~132.00~~	~~825.00~~	~~137.00~~	~~860.00~~
~~Benzo(b)fluoranthene~~	~~67.20~~	~~421.00~~	~~67.30~~	~~421.00~~	~~68.40~~	~~428.00~~	~~69.60~~	~~436.00~~
~~Benzo(k)fluoranthene~~	~~23,800.00~~	~~149,000.00~~	~~23,900.00~~	~~149,000.00~~	~~25,000.00~~	~~156,000.00~~	~~26,300.00~~	~~164,000.00~~
~~Chrysene~~	~~7,150.00~~	~~44,700.00~~	~~7,160.00~~	~~44,800.00~~	~~7,270.00~~	~~45,500.00~~	~~7,410.00~~	~~46,400.00~~
~~Dibenz(a,h)anthracene~~	~~353.00~~	~~2,210.00~~	~~356.00~~	~~2,230.00~~	~~404.00~~	~~2,530.00~~	~~461.00~~	~~2,890.00~~
~~Indeno(1,2,3-c,d)pyrene~~	~~2,020.00~~	~~12,600.00~~	~~2,030.00~~	~~12,700.00~~	~~2,100.00~~	~~13,100.00~~	~~2,190.00~~	~~13,700.00~~
~~Naphthalene~~	~~22.20~~	~~359.00~~	~~22.20~~	~~360.00~~	~~22.50~~	~~365.00~~	~~22.90~~	~~372.00~~

* Methyl tertiary-butyl ether
All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 2

Chemicals of Concern	Groundwater to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.
Benzene	4.18	26.2	4.19	26.2	4.27	26.7	4.38	27.4
Toluene	2,180	35,300	2,180	35,300	2,220	36,100	2,280	36,900
Ethylbenzene	417	6,770	418	6,780	426	6,920	437	7,080
o, m and p-Xylenes	50.8	824	50.8	825	51.9	842	53.2	862
Naphthalene	16.9	106	16.9	106	17.3	108	17.7	111
1,2,4 - Trimethylbenzene	4.18	67.7	4.18	67.8	4.27	69.2	4.37	70.9
MTBE*	1,340	8,380	1,340	8,390	1,370	8,580	1,410	8,800
1,2 – Dibromoethane (EDB)	0.910	5.69	0.911	5.70	0.931	5.83	0.955	5.98
1,2 – Dichloroethane (EDC)	5.92	37.0	5.93	37.1	6.05	37.9	6.21	38.8
Benzo(a)anthracene	207	1,290	207	1,300	212	1,330	218	1,360
Benzo(a)pyrene	183	1,140	183	1,150	191	1,190	200	1,250
Benzo(b)fluoranthene	1,620	10,100	1,620	10,200	1,690	10,600	1,760	11,000
Benzo(k)fluoranthene	1,690	10,600	1,690	10,600	1,760	11,000	1,840	11,500
Chrysene	6,830	42,700	6,840	42,800	7,030	44,000	7,260	45,400
Dibenz(a,h)anthracene	224	1,400	225	1,400	237	1,480	252	1,580
Indeno(1,2,3-c,d)pyrene	1,130	7,050	1,130	7,060	1,160	7,280	1,200	7,540

~~Chemicals of Concern~~	~~Ground Water to Indoor Air~~							
	~~<15 Feet~~		~~15-30 Feet~~		~~31-50 Feet~~		~~>50 Feet~~	
	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~
~~Benzene~~	~~4.29~~	~~26.80~~	~~4.29~~	~~26.90~~	~~4.38~~	~~27.40~~	~~4.49~~	~~28.10~~
~~Toluene~~	~~155.00~~	~~2,520.00~~	~~155.00~~	~~2,520.00~~	~~159.00~~	~~2,570.00~~	~~162.00~~	~~2,640.00~~
~~Ethylbenzene~~	~~382.00~~	~~6,190.00~~	~~382.00~~	~~6,200.00~~	~~390.00~~	~~6,330.00~~	~~399.00~~	~~6,480.00~~
~~o, m and p-Xylenes~~	~~41.40~~	~~672.00~~	~~41.40~~	~~672.00~~	~~42.30~~	~~686.00~~	~~43.30~~	~~703.00~~
~~MTBE*~~	~~12,400.00~~	~~201,000.00~~	~~12,400.00~~	~~201,000.00~~	~~12,700.00~~	~~206,000.00~~	~~13,000.00~~	~~211,000.00~~
~~Benzo(a)anthracene~~	~~669.00~~	~~4,180.00~~	~~670.00~~	~~4,190.00~~	~~689.00~~	~~4,310.00~~	~~712.00~~	~~4,450.00~~
~~Benzo(a)pyrene~~	~~127.00~~	~~795.00~~	~~127.00~~	~~797.00~~	~~132.00~~	~~828.00~~	~~138.00~~	~~865.00~~
~~Benzo(b)fluoranthene~~	~~67.40~~	~~422.00~~	~~67.50~~	~~422.00~~	~~69.00~~	~~432.00~~	~~70.80~~	~~443.00~~
~~Benzo(k)fluoranthene~~	~~23,800.00~~	~~149,000.00~~	~~23,800.00~~	~~149,000.00~~	~~24,900.00~~	~~156,000.00~~	~~26,200.00~~	~~164,000.00~~
~~Chrysene~~	~~7,170.00~~	~~44,900.00~~	~~7,180.00~~	~~44,900.00~~	~~7,340.00~~	~~45,900.00~~	~~7,530.00~~	~~47,100.00~~
~~Dibenz(a,h)anthracene~~	~~344.00~~	~~2,150.00~~	~~346.00~~	~~2,160.00~~	~~369.00~~	~~2,310.00~~	~~397.00~~	~~2,490.00~~
~~Indeno(1,2,3-c,d)pyrene~~	~~2,020.00~~	~~12,700.00~~	~~2,030.00~~	~~12,700.00~~	~~2,110.00~~	~~13,200.00~~	~~2,200.00~~	~~13,800.00~~
~~Naphthalene~~	~~22.20~~	~~360.00~~	~~22.20~~	~~361.00~~	~~22.70~~	~~369.00~~	~~23.30~~	~~378.00~~

* Methyl tertiary-butyl ether
All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 3

Chemicals of Concern	Groundwater to Indoor Air							
	<15 Feet		15-30 Feet		31-50 Feet		>50 Feet	
	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.	Residential	Non-Resid.
Benzene	4.29	26.8	4.31	27.0	4.69	29.3	5.14	32.1
Toluene	2,230	36,200	2,240	36,400	2,440	39,600	2,670	43,300
Ethylbenzene	428	6,940	430	6,980	468	7,590	512	8,310
o, m and p-Xylenes	52.1	845	52.4	849	56.9	924	62.4	1,010
Naphthalene	17.3	108	17.4	109	19.0	119	20.9	130
1,2,4 - Trimethylbenzene	4.28	69.5	4.30	69.8	4.68	75.9	5.13	83.2
MTBE*	1,370	8,600	1,380	8,650	1,510	9,440	1,660	10,400
1,2 – Dibromoethane (EDB)	0.934	5.84	0.939	5.88	1.02	6.41	1.12	7.04
1,2 – Dichloroethane (EDC)	6.07	38.0	6.11	38.2	6.66	41.7	7.32	45.8
Benzo(a)anthracene	210	1,310	210	1,320	223	1,400	238	1,490
Benzo(a)pyrene	181	1,130	181	1,130	184	1,150	188	1,180
Benzo(b)fluoranthene	1,610	10,100	1,610	10,100	1,640	10,300	1,680	10,500
Benzo(k)fluoranthene	1,680	10,500	1,680	10,500	1,710	10,700	1,740	10,900
Chrysene	6,830	42,700	6,840	42,800	7,060	44,200	7,310	45,700
Dibenz(a,h)anthracene	220	1,380	220	1,380	224	1,400	227	1,420
Indeno(1,2,3-c,d)pyrene	1,120	7,040	1,130	7,050	1,160	7,230	1,190	7,450

~~Chemicals of Concern~~	~~Ground Water to Indoor Air~~							
	~~<15 Feet~~		~~15-30 Feet~~		~~31-50 Feet~~		~~>50 Feet~~	
	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~	~~Residential~~	~~Non-Resid.~~
~~Benzene~~	~~4.39~~	~~27.50~~	~~4.42~~	~~27.60~~	~~4.80~~	~~30.10~~	~~5.26~~	~~32.90~~
~~Toluene~~	~~159.00~~	~~2,580.00~~	~~160.00~~	~~2,600.00~~	~~174.00~~	~~2,820.00~~	~~190.00~~	~~3,090.00~~
~~Ethylbenzene~~	~~391.00~~	~~6,350.00~~	~~393.00~~	~~6,380.00~~	~~427.00~~	~~6,930.00~~	~~468.00~~	~~7,590.00~~
~~o, m and p-Xylenes~~	~~42.40~~	~~688.00~~	~~42.70~~	~~692.00~~	~~46.40~~	~~752.00~~	~~50.80~~	~~824.00~~
~~MTBE*~~	~~12,700.00~~	~~206,000.00~~	~~12,800.00~~	~~207,000.00~~	~~13,900.00~~	~~226,000.00~~	~~15,300.00~~	~~249,000.00~~
~~Benzo(a)anthracene~~	~~669.00~~	~~4,190.00~~	~~670.00~~	~~4,190.00~~	~~690.00~~	~~4,320.00~~	~~714.00~~	~~4,470.00~~
~~Benzo(a)pyrene~~	~~126.00~~	~~789.00~~	~~126.00~~	~~790.00~~	~~129.00~~	~~804.00~~	~~131.00~~	~~822.00~~
~~Benzo(b)fluoranthene~~	~~68.90~~	~~431.00~~	~~69.30~~	~~433.00~~	~~74.90~~	~~469.00~~	~~81.70~~	~~511.00~~
~~Benzo(k)fluoranthene~~	~~23,500.00~~	~~147,000.00~~	~~23,600.00~~	~~147,000.00~~	~~23,900.00~~	~~150,000.00~~	~~24,400.00~~	~~153,000.00~~
~~Chrysene~~	~~7,330.00~~	~~45,800.00~~	~~7,360.00~~	~~46,100.00~~	~~7,960.00~~	~~49,800.00~~	~~8,660.00~~	~~54,200.00~~
~~Dibenz(a,h)anthracene~~	~~337.00~~	~~2,110.00~~	~~337.00~~	~~2,110.00~~	~~342.00~~	~~2,140.00~~	~~347.00~~	~~2,170.00~~
~~Indeno(1,2,3-c,d)pyrene~~	~~2,010.00~~	~~12,600.00~~	~~2,010.00~~	~~12,600.00~~	~~2,050.00~~	~~12,800.00~~	~~2,090.00~~	~~13,100.00~~
~~Naphthalene~~	~~22.80~~	~~370.00~~	~~22.90~~	~~372.00~~	~~25.00~~	~~406.00~~	~~27.50~~	~~446.00~~

* Methyl tertiary-butyl ether
All chemical concentrations expressed in milligrams per liter (mg/L).

(c) The action levels in ~~ground water~~ groundwater for the ~~ground water~~ groundwater to outdoor air pathway for chemical(s) of concern shall be as follows for the applicable soil type:

Soil Class 1

Chemicals of Concern	Groundwater to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	788	496	5,370
Toluene	431,000	704,000	912,000
Ethylbenzene	86,100	141,000	182,000
o, m, and p-Xylenes	9,280	15,200	19,600
Naphthalene	843	531	2,500
1,2,4 - Trimethylbenzene	781	1,280	1,650
MTBE*	84,100	53,000	>1E+6
1,2 – Dibromoethane (EDB)	42.3	26.7	864
1,2 – Dichloroethane (EDC)	506	319	2,680
Benzo(a)anthracene	5,960	3,750	121,000
Benzo(a)pyrene	12,900	8,140	264,000
Benzo(b)fluoranthene	96,100	60,600	>1E+6
Benzo(k)fluoranthene	106,000	66,800	>1E+6
Chrysene	249,000	157,000	>1E+6
Dibenz(a,h)anthracene	27,900	17,600	570,000
Indeno(1,2,3-c,d)pyrene	46,200	29,100	943,000

~~Chemicals of Concern~~	~~Ground Water to Outdoor Air~~		
	~~Residential~~	~~Non-Residential~~	~~Excavation Worker~~
~~Benzene~~	~~818.00~~	~~515.00~~	~~5,520.00~~
~~Toluene~~	~~32,500.00~~	~~53,100.00~~	~~68,800.00~~
~~Ethylbenzene~~	~~82,700.00~~	~~135,000.00~~	~~175,000.00~~
~~o, m, and p-Xylenes~~	~~8,560.00~~	~~14,000.00~~	~~18,100.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~758,000.00~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(a)anthracene~~	~~24,800.00~~	~~15,600.00~~	~~507,000.00~~
~~Benzo(a)pyrene~~	~~7,680.00~~	~~4,840.00~~	~~157,000.00~~
~~Benzo(b)fluoranthene~~	~~2,020.00~~	~~1,270.00~~	~~41,200.00~~
~~Benzo(k)fluoranthene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Chrysene~~	~~212,000.00~~	~~133,000.00~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~78,400.00~~	~~49,400.00~~	~~>1E^+6~~
~~Indeno(1,2,3-c,d)pyrene~~	~~123,000.00~~	~~77,200.00~~	~~>1E^+6~~
~~Naphthalene~~	~~1,200.00~~	~~1,970.00~~	~~2,550.00~~

* Methyl tertiary-butyl ether
All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 2

Chemicals of Concern	Groundwater to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	828	522	5,650
Toluene	452,000	739,000	956,000
Ethylbenzene	90,100	147,000	191,000
o, m, and p-Xylenes	9,780	16,000	20,700
Naphthalene	1,020	640	3,020
1,2,4 - Trimethylbenzene	821	1,340	1,740
MTBE*	97,800	61,600	>1E+6
1,2 – Dibromoethane (EDB)	51.7	32.6	1,050
1,2 – Dichloroethane (EDC)	566	356	3,000
Benzo(a)anthracene	8,130	5,120	166,000
Benzo(a)pyrene	12,900	8,110	263,000
Benzo(b)fluoranthene	104,000	65,200	>1E+6
Benzo(k)fluoranthene	111,000	70,200	>1E+6
Chrysene	319,000	201,000	>1E+6
Dibenz(a,h)anthracene	20,600	13,000	420,000
Indeno(1,2,3-c,d)pyrene	57,000	35,900	>1E+6

~~Chemicals of Concern~~	~~Ground Water to Outdoor Air~~		
	~~Residential~~	~~Non-Residential~~	~~Excavation Worker~~
~~Benzene~~	~~860.00~~	~~541.00~~	~~5,800.00~~
~~Toluene~~	~~34,000.00~~	~~55,600.00~~	~~72,000.00~~
~~Ethylbenzene~~	~~86,300.00~~	~~141,000.00~~	~~183,000.00~~
~~o, m and p-Xylenes~~	~~8,960.00~~	~~14,600.00~~	~~18,900.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~885,000.00~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(a)anthracene~~	~~31,600.00~~	~~19,900.00~~	~~645,000.00~~
~~Benzo(a)pyrene~~	~~8,200.00~~	~~5,170.00~~	~~167,000.00~~
~~Benzo(b)fluoranthene~~	~~2,720.00~~	~~1,710.00~~	~~55,500.00~~
~~Benzo(k)fluoranthene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Chrysene~~	~~286,000.00~~	~~180,000.00~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~38,700.00~~	~~24,400.00~~	~~789,000.00~~
~~Indeno(1,2,3-c,d)pyrene~~	~~131,000.00~~	~~82,400.00~~	~~>1E^+6~~
~~Naphthalene~~	~~1,430.00~~	~~2,340.00~~	~~3,030.00~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per liter (mg/L).

Soil Class 3

Chemicals of Concern	Groundwater to Outdoor Air		
	Residential	Non-Residential	Excavation Worker
Benzene	1,300	821	8,880
Toluene	698,000	>1E+6	>1E+6
Ethylbenzene	137,000	224,000	290,000
o, m, and p-Xylenes	15,500	25,400	32,900
Naphthalene	2,990	1,880	8,880
1,2,4 - Trimethylbenzene	1,300	2,120	2,740
MTBE*	255,000	161,000	>1E+6
1,2 – Dibromoethane (EDB)	158	99.4	3,220
1,2 – Dichloroethane (EDC)	1,260	794	6,680
Benzo(a)anthracene	21,000	13,200	428,000
Benzo(a)pyrene	5,100	3,210	104,000
Benzo(b)fluoranthene	49,900	31,500	>1E+6
Benzo(k)fluoranthene	50,300	31,700	>1E+6
Chrysene	347,000	219,000	>1E+6
Dibenz(a,h)anthracene	5,170	3,260	106,000
Indeno(1,2,3-c,d)pyrene	48,100	30,300	982,000

~~Chemicals of Concern~~	~~Ground Water to Outdoor Air~~		
	~~Residential~~	~~Non-Residential~~	~~Excavation Worker~~
~~Benzene~~	~~1,350.00~~	~~848.00~~	~~9,080.00~~
~~Toluene~~	~~51,500.00~~	~~84,100.00~~	~~109,000.00~~
~~Ethylbenzene~~	~~129,000.00~~	~~211,000.00~~	~~273,000.00~~
~~o, m, and p-Xylenes~~	~~13,600.00~~	~~22,200.00~~	~~28,800.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(a)anthracene~~	~~33,000.00~~	~~20,800.00~~	~~673,000.00~~
~~Benzo(a)pyrene~~	~~3,870.00~~	~~2,440.00~~	~~78,900.00~~
~~Benzo(b)fluoranthene~~	~~9,560.00~~	~~6,020.00~~	~~195,000.00~~
~~Benzo(k)fluoranthene~~	~~642,000.00~~	~~405,000.00~~	~~>1E^+6~~
~~Chrysene~~	~~991,000.00~~	~~625,000.00~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~7,210.00~~	~~4,540.00~~	~~147,000.00~~
~~Indeno(1,2,3-c,d)pyrene~~	~~61,500.00~~	~~38,700.00~~	~~>1E^+6~~
~~Naphthalene~~	~~4,030.00~~	~~6,590.00~~	~~8,540.00~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per liter (mg/L).

(d) The action levels in soil for the direct contact with soil pathway for chemical(s) of concern shall be as follows for all soil types:

Chemicals of Concern	Direct Contact		
	Residential	Non-Residential	Excavation Worker
Benzene	26	140	1,200

Toluene	820	820	820
Ethylbenzene	130	480	480
o, m and p-Xylenes	260	260	260
Naphthalene	90	450	560
1,2,4 - Trimethylbenzene	160	220	220
MTBE*	1,100	5,700	8,900
1,2 – Dibromoethane (EDB)	0.83	4.4	38
1,2 – Dichloroethane (EDC)	11	56	480
Benzo(a)anthracene	12	58	1,200
Benzo(a)pyrene	1.2	5.8	120
Benzo(b)fluoranthene	12	58	1,200
Benzo(k)fluoranthene	120	580	12,000
Chrysene	1,200	5,800	120,000
Dibenz(a,h)anthracene	1.2	5.8	120
Indeno(1,2,3-c,d)pyrene	12	58	1,200

~~Chemicals Of Concern~~	~~Direct Contact~~		
	~~Residential~~	~~Non-Residential~~	~~Excavation Worker~~
~~Benzene~~	~~9.8~~	~~100~~	~~310~~
~~Toluene~~	~~590~~	~~5,900~~	~~24,000~~
~~Ethylbenzene~~	~~1,500~~	~~17,000~~	~~160,000~~
~~o, m and p-Xylenes~~	~~660~~	~~6,400~~	~~7,000~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~5,300~~	~~52,000~~	~~57,000~~
~~Benzo(a)anthracene~~	~~11~~	~~63~~	~~810~~
~~Benzo(a)pyrene~~	~~1.1~~	~~6.3~~	~~81~~
~~Benzo(b)fluoranthene~~	~~11~~	~~63~~	~~810~~
~~Benzo(k)fluoranthene~~	~~110~~	~~630~~	~~8,100~~
~~Chrysene~~	~~1,100~~	~~6,700~~	~~41,000~~
~~Dibenz(a,h)anthracene~~	~~1.1~~	~~6.7~~	~~41~~
~~Indeno(1,2,3-c,d)pyrene~~	~~11~~	~~67~~	~~410~~
~~Naphthalene~~	~~54~~	~~530~~	~~1,900~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

(e) The Soil Action Levels for Total Petroleum Hydrocarbon (TPH) shall be as follows:

Petroleum Fraction	Soil Class 1	Soil Class 2	Soil Class 3
Light Distillate Fraction (C6-C12)	1,000	5,000	8,000
Middle Distillate Fraction (C10-20)	2,000	10,000	20,000
Heavy Distillate Fraction (C20-C34)	5,000	20,000	40,000

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

(f) The action levels in soil for the soil to indoor air, soil to outdoor air, soil to drinking water leaching and soil to non-drinking water leaching pathway for chemical(s) of concern shall be as follows for the applicable soil type:

Soil Class 1

Chemicals of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	1.67	10.5	52.7	33.2	359	0.246	20.5
Toluene	1,240	20,200	39,200	64,000	82,900	70.7	15,300
Ethylbenzene	406	6,590	12,800	20,900	27,100	84.5	5,020
o, m and p-Xylenes	42.7	693	1,350	2,200	2,850	1,030	524
Naphthalene	52.7	330	1,670	1,050	4,950	0.511	613
1,2,4 - Trimethylbenzene	5.35	86.7	169	275	356	2.37	65.8
MTBE*	150	940	4,740	2,990	96,800	1.58	1,760
1,2 – Dibromoethane (EDB)	0.154	0.961	4.86	3.06	99.1	0.000982	1.78
1,2 – Dichloroethane (EDC)	1.01	6.33	31.9	20.1	169	0.101	11.9
Benzo(a)anthracene	72,800	456,000	>1E+6	>1E+6	>1E+6	38.1	854,000
Benzo(a)pyrene	213,000	>1E+6	>1E+6	>1E+6	>1E+6	29.2	>1E+6
Benzo(b)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	136	>1E+6
Benzo(k)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	1,270	>1E+6
Chrysene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	3,870	>1E+6
Dibenz(a,h)anthracene	853,000	>1E+6	>1E+6	>1E+6	>1E+6	46.6	>1E+6
Indeno(1,2,3-c,d)pyrene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	1,020	>1E+6

~~Chemicals of Concern~~	~~Soil to Indoor Air~~		~~Soil to Outdoor Air~~			~~Soil to Drinking Water Leaching~~	~~Soil to Non-Drinking Water~~
	~~Residential~~	~~Non-Residential~~	~~Residential~~	~~Non-Residential~~	~~Excavation~~		
~~Benzene~~	~~1.04~~	~~6.50~~	~~32.70~~	~~20.60~~	~~221.00~~	~~0.149~~	~~12.80~~
~~Toluene~~	~~61.300~~	~~994.00~~	~~1,930.00~~	~~3,150.00~~	~~4,090.00~~	~~49.100~~	~~760.00~~

~~Ethylbenzene~~	~~199.000~~	~~3,230.00~~	~~6,280.00~~	~~10,300.00~~	~~13,300.00~~	~~45.500~~	~~2,480.00~~
~~o, m and p-Xylenes~~	~~15.700~~	~~254.00~~	~~494.00~~	~~806.00~~	~~1,040.00~~	~~469.00~~	~~194.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~1,240.00~~	~~20,200.00~~	~~39,300.00~~	~~64,200.00~~	~~83,100.00~~	~~0.470~~	~~14,600.00~~
~~Benzo(a)anthracene~~	~~476,000.00~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~22.20~~	~~>1E^+6~~
~~Benzo(a)pyrene~~	~~245,000.00~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~50.60~~	~~>1E^+6~~
~~Benzo(b)fluoranthene~~	~~165,000.00~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~55.30~~	~~>1E^+6~~
~~Benzo(k)fluoranthene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~501.00~~	~~>1E^+6~~
~~Chrysene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~4,410.00~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~94.00~~	~~>1E^+6~~
~~Indeno(1,2,3-c,d)pyrene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~244.00~~	~~>1E^+6~~
~~Naphthalene~~	~~54.000~~	~~877.000~~	~~1,710.00~~	~~2,790.00~~	~~3,610.00~~	~~39.80~~	~~632.00~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

Soil Class 2

Chemicals of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	1.95	12.2	86.2	54.3	587	0.437	36.6
Toluene	1,470	23,900	65,100	106,000	138,000	168	36,700
Ethylbenzene	491	7,960	21,700	35,400	45,800	163	9,720
o, m and p-Xylenes	51.8	841	2,290	3,740	4,840	1,950	993
Naphthalene	65.8	412	2,910	1,830	8,650	1.12	1,350
1,2,4 - Trimethylbenzene	6.54	106	289	472	611	5.89	164
MTBE*	167	1,050	7,400	4,660	151,000	2.67	2,980
1,2 – Dibromoethane (EDB)	0.178	1.11	7.87	4.96	161	0.00177	3.22
1,2 – Dichloroethane (EDC)	1.16	7.26	51.3	32.3	272	0.177	20.9
Benzo(a)anthracene	91,200	571,000	>1E+6	>1E+6	>1E+6	1,480	>1E+6
Benzo(a)pyrene	267,000	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Benzo(b)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Benzo(k)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	57,500	>1E+6
Chrysene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	45,000	>1E+6
Dibenz(a,h)anthracene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	N/A	>1E+6
Indeno(1,2,3-c,d)pyrene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	N/A	>1E+6

~~Chemical of Concern~~	~~Soil to Indoor Air~~		~~Soil to Outdoor Air~~			~~Soil to Drinking Water Leaching~~	~~Soil to Non-Drinking Water~~
	~~Residential~~	~~Non-Residential~~	~~Residential~~	~~Non-Residential~~	~~Excavation~~		
~~Benzene~~	~~1.15~~	~~7.22~~	~~51.00~~	~~32.10~~	~~344.00~~	~~0.252~~	~~21.60~~
~~Toluene~~	~~70.800~~	~~1,150.000~~	~~3,130.00~~	~~5,110.00~~	~~6,610.00~~	~~105.000~~	~~1,630.00~~
~~Ethylbenzene~~	~~233.000~~	~~3,780.000~~	~~10,300.00~~	~~16,800.00~~	~~21,800.00~~	~~83.000~~	~~4,530.00~~
~~o, m and p-Xylenes~~	~~18.000~~	~~291.000~~	~~793.00~~	~~1,300.00~~	~~1,680.00~~	~~825.000~~	~~342.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~1,370.000~~	~~22,200.000~~	~~60,500.00~~	~~98,900.00~~	~~128,000.00~~	~~0.788~~	~~24,400.00~~

~~Benzo(a)anthracene~~	~~596,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~18,600.00~~	~~>1E^+6~~
~~Benzo(a)pyrene~~	~~306,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(b)fluoranthene~~	~~206,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(k)fluoranthene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~738,000.00~~	~~>1E^+6~~
~~Chrysene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~451,000.00~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Indeno(1,2,3-c,d)pyrene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Naphthalene~~	~~67.300~~	~~1,090.000~~	~~2,980.00~~	~~4,860.00~~	~~6,300.00~~	~~84.20~~	~~1,340.00~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

Soil Class 3

Chemicals of Concern	Soil to Indoor Air		Soil to Outdoor Air			Soil to Drinking Water Leaching	Soil to Non-Drinking Water
	Residential	Non-Residential	Residential	Non-Residential	Excavation		
Benzene	2.39	15.0	451	284	3,070	1.63	140
Toluene	1,790	29,100	338,000	552,000	715,000	850	189,000
Ethylbenzene	596	9,670	112,000	184,000	238,000	639	39,100
o, m and p-Xylenes	63.5	1,030	12,000	19,600	25,300	7,490	3,900
Naphthalene	80.8	505	15,000	9,430	44,500	4.99	6,160
1,2,4 - Trimethylbenzene	7.99	130	1,510	2,460	3,190	31.1	886
MTBE*	236	1,480	44,100	27,800	899,000	11.5	13,100
1,2 – Dibromoethane (EDB)	0.239	1.49	44.1	27.8	899	0.00734	13.7
1,2 – Dichloroethane (EDC)	1.54	9.65	289	182	1,530	0.714	86.7
Benzo(a)anthracene	111,000	691,000	>1E+6	>1E+6	>1E+6	275,000	>1E+6
Benzo(a)pyrene	318,000	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Benzo(b)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Benzo(k)fluoranthene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6

Chrysene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Dibenz(a,h)anthracene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6
Indeno(1,2,3-c,d)pyrene	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6	>1E+6

~~Chemical of Concern~~	~~Soil to Indoor Air~~		~~Soil to Outdoor Air~~			~~Soil to Drinking Water Leaching~~	~~Soil to Non-Drinking Water~~
	~~Residential~~	~~Non-Residential~~	~~Residential~~	~~Non-Residential~~	~~Excavation~~		
~~Benzene~~	~~1.42~~	~~8.86~~	~~267.00~~	~~168.00~~	~~1,800.00~~	~~0.937~~	~~82.30~~
~~Toluene~~	~~86.000~~	~~1,400.000~~	~~16,200.00~~	~~26,500.00~~	~~34,300.00~~	~~479.000~~	~~7,610.00~~
~~Ethylbenzene~~	~~282.000~~	~~4,570.000~~	~~53,100.00~~	~~86,800.00~~	~~112,000.00~~	~~313.000~~	~~17,500.00~~
~~o, m and p-Xylenes~~	~~21.700~~	~~353.000~~	~~4,100.00~~	~~6,700.00~~	~~8,670.00~~	~~3,060.000~~	~~1,300.00~~
~~Methyl tertiary-butyl ether (MTBE)~~	~~1,970.000~~	~~32,000.000~~	~~368,000.00~~	~~601,000.00~~	~~778,000.00~~	~~3.440~~	~~109,000.00~~
~~Benzo(a)anthracene~~	~~716,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(a)pyrene~~	~~366,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(b)fluoranthene~~	~~251,000.000~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Benzo(k)fluoranthene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Chrysene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Dibenz(a,h)anthracene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Indeno (1,2,3-c,d)pyrene~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~	~~>1E^+6~~
~~Naphthalene~~	~~82.800~~	~~1,340.000~~	~~15,400.00~~	~~25,100.00~~	~~32,500.00~~	~~362.000~~	~~5,890.000~~

*** Methyl tertiary-butyl ether**

All chemical concentrations expressed in milligrams per kilogram (mg/kg).

(4) Multiple chemical adjustments.

Where ten or more non-carcinogenic or carcinogenic chemicals of concern are present when analyzing for Analytical Groups 4 and/or 5, the standard for each chemical of concern shall be adjusted to meet the following goals:

(a) For chemicals of concern having carcinogenic effects, the cumulative carcinogenic risk for all chemical(s) of concern shall not exceed a total excess upper bound cancer risk of $1x\ 10^{-05}$ (i.e., one excess cancer in a population of 100,000);

(b) For chemicals of concern having non-carcinogenic effects, the cumulative risk for all chemical(s) of concern shall not exceed a hazard index of one.

(c) A cumulative adjustment shall be made for each of the following pathways:

(i) ~~Ground water~~ **Groundwater** ingestion;

(ii) Direct contact with soil;

(iii) Soil to indoor air; and

(iv) ~~Ground water~~ **Groundwater** to indoor air.

(K) Interim Response Action.

(1) If an Interim Response Action is to be conducted it must be implemented within ninety days of approval of a Tier 1 Delineation conducted pursuant to paragraph (I) of this rule, **approval of** a Tier 2 Evaluation conducted pursuant to paragraph (L) of this rule or **approval of** a Tier 3 Evaluation conducted pursuant to paragraph (M) of this rule. Once an Interim Response Action has been completed, previously identified potentially complete exposure pathways shall be re-evaluated.

(2) An Interim Response Action Notification shall be submitted on a form prescribed by the state fire marshal ten days prior to beginning the Interim Response Action. The notification shall include the following:

(a) A description of the Interim Response Action;

(b) The anticipated volume of soil to be excavated, if applicable;

(c) The estimated volume of petroleum contaminated soil to be removed from the site and free product and/or ~~ground water~~ **groundwater** to be recovered, if applicable;

(d) The anticipated length of time of the interim response action;

(e) A site map indicating the limits of excavation if soil is to be removed;

(f) A proposed sampling and analysis plan; and

(g) A brief description of the rationale for the selected Interim Response Action.

(3) Prior approval of an interim response action shall be obtained from the state fire marshal if:

(a) The combined total volume of soil to be excavated for all tier evaluations will be greater than eight hundred cubic yards;

(b) The anticipated time to initiate and complete the interim response action is greater than three months; or

(c) More than one interim response action is to be conducted for all tier evaluations.

(4) A report summarizing the Interim Response Action(s) shall be submitted to the state fire marshal within sixty days of completing the activities and shall contain, at a minimum, the following information as appropriate:

(a) A completed Petroleum Contaminated Soil form as provided by the state fire marshal;

(b) Copies of laboratory data sheets and chain-of-custody form(s);

(c) A site map showing the limits of the excavation zone(s) and sample locations;

(d) A discussion of sample collection, field screening and preservation techniques;

(e) A discussion of the treatment technique used to address chemical(s) of concern in soil and/or ~~ground water~~ groundwater;

(f) Actual volume of soil and/or ~~ground water~~ groundwater remediated;

(g) A discussion of soil and ~~ground water~~ groundwater disposal techniques; and

(h) Laboratory analysis summary form as prescribed by the state fire marshal.

(L) Tier 2 Evaluation.

The purpose of a Tier 2 Evaluation is to define the distribution of chemical(s) of concern to the applicable action levels, determine the current and potential future land use for the UST site and surrounding properties, develop a site conceptual exposure model and develop site-specific target levels using spreadsheets and models approved by the state fire marshal. A Tier 2 Evaluation shall be conducted in accordance with all of the following:

(1) Determination of the distribution of chemical(s) of concern.

(a) The distribution of chemical(s) of concern shall be delineated in all directions from the source areas(s) to the applicable Tier 1 action level(s) determined for the UST site.

(b) Soil borings and ~~ground water~~ groundwater monitoring wells shall be installed in accordance with paragraph (H)(1)(d) of this rule.

(c) If the highest concentration of a particular chemical(s) of concern is determined to be below detection limits and below action levels as specified by this rule during the Tier 1 Source Investigation conducted pursuant to paragraph (H) of this rule, then that chemical(s) of concern may be excluded from future tier evaluations.

(d) If the determination of the likely distribution of chemical(s) of concern requires off-site access, owners and operators shall use their best efforts to obtain permission to enter such off-site areas to complete the investigations required by this rule. At a minimum, this effort shall include at least three attempts to contact the property owner within a ninety day period for access permission. If access cannot be obtained, owners or operators shall submit written notice to the state fire marshal within forty-five days after determining off-site access cannot be obtained or forty-five days after the third unsuccessful request for access. The notice shall describe the efforts taken by the owners or operators to obtain off-site access, the reasons why access could not be obtained, and include contact information for the off-site access requests along with copies of documents and/or phone logs. Owners and operators shall take additional action to obtain off-site access if requested by the state fire marshal.

(2) Land use determination.

(a) Land use for the UST site shall be residential unless:

(i) The current land use at the UST site is not residential and seventy-five percent of the area within three hundred feet of the property boundaries of the UST site is non-residential land use; or

(ii) A land use restriction as approved by the state fire marshal for the UST site in accordance with paragraph (L)(4)(a)(ii)(*c*) of this rule has been documented and recorded in the county where the UST site is located or the owners and operators enter into an environmental covenant with the state fire marshal in accordance with sections 5301.80 to 5301.92 of the Revised Code.

(b) Land use for the UST site and adjacent properties shall be determined as residential or non-residential using reasonably available information based on the following:

(i) The historical land use of the UST site and adjacent properties*;*

(ii) The current land use of the UST site and adjacent properties;

(iii) The historical zoning or planning designation for the UST site and adjacent properties; and

(iv) The current zoning or planning designation for the UST site and adjacent properties.

(3) Action level determination.

Action levels for the UST site shall be determined in accordance with the following:

(a) Non-residential land use.

(i) If the UST site meets the non-residential land use determination pursuant to paragraph (L)(2)(a) of this rule, then the owners and operators shall compare the concentrations of chemical(s) of concern to the appropriate non-residential action levels and ~~**ground water**~~ **groundwater** use action levels in paragraph (J)(3) of this rule.

(*a*) If the concentrations of all chemical(s) of concern are at or below the action levels for

all applicable pathways, then no further action is required. The owners and operators shall prepare a Tier 2 Evaluation report in accordance with paragraph (L)(7) of this rule.

(b) If the concentration of a specific chemical of concern is at or below the action level(s), then no further evaluation is necessary for that chemical of concern and for the corresponding complete exposure pathway.

(c) If one or more of the concentrations of chemical(s) of concern are above non-residential land use and/or ~~**ground water**~~ **groundwater** use action levels as determined in accordance with paragraph (I)(2) of this rule for any applicable pathway, owners and operators shall develop a site conceptual exposure model pursuant to paragraph (L)(4) of this rule.

(b) Residential land use.

If the UST site does not meet the non-residential land use determination pursuant to paragraph (L)(2) of this rule, owners and operators shall develop a site conceptual exposure model pursuant to paragraph (L)(4) of this rule.

(c) If chemical(s) of concern have migrated off the UST site, action levels shall be developed for each impacted property pursuant to paragraph (J) of this rule according to the corresponding land use.

(4) Site conceptual exposure model.

A site conceptual exposure model shall be developed to clearly describe the conditions under which an exposure to chemical(s) of concern may occur by identifying exposure pathways and points of exposure in accordance with the following:

(a) Pathway evaluation.

(i) Exposure pathway identification.

Identify all exposure pathways that exceed Tier 1 action levels determined pursuant to paragraphs (H)(2) and (L)(3) of this rule. Pathway identification shall include identifying all receptors, media and transport mechanisms and routes of exposure in accordance with the following:

(a) Receptor identification

Identify current and potential future receptors that may be exposed to the release. At a minimum, the following potential receptors shall be evaluated:

(i) Adults and children for residential scenarios;

(ii) Adults for non-residential scenarios;

(iii) Adults for excavation worker scenarios; and

(iv) Aquatic life and recreational receptors in a surface water body located within

three hundred feet of the UST site.

(b) Media identification.

The environmental media that are likely to contain concentrations of chemicals of concern shall be identified for evaluation. The following environmental media shall be evaluated:

(i) Soil;

(ii) ~~Ground water~~ **Groundwater**;

(iii) Surface water;

(iv) Indoor air; and

(v) Outdoor air.

(c) Transport mechanisms identification.

All fate and transport mechanisms for chemical(s) of concern in the environmental media shall be identified. The following transport mechanisms shall be evaluated for all applicable pathways:

(i) Atmospheric dispersion;

(ii) Volatilization;

(iii) Enclosed space vapor accumulation; and

(iv) Soil leaching and ~~ground water~~ **groundwater** transport.

(d) Routes of exposure identification.

The following routes of exposure shall be evaluated:

(i) Ingestion;

(ii) Inhalation; and

(iii) Direct contact.

(ii) Pathway completeness evaluation.

Evaluate exposure pathways to determine if the exposure pathways identified in the site conceptual exposure model developed in accordance with paragraph (L)(4)(a)(i) of this rule are complete.

(*a*) An exposure pathway is incomplete when any one of the following criteria exists:

(i) There is no point(s) of exposure identified pursuant to paragraph (L)(4)(b) of this

rule, for a chemical of concern in an identified environmental media;

(ii) Site-specific data demonstrates that there is no transport mechanism in the identified environmental media to move the chemical(s) of concern from the source area(s) to the point(s) of exposure;

(iii) Site-specific data demonstrates that there are no route(s) of exposure for the identified receptor;

(iv) Points of exposure are eliminated by ~~ground water~~ groundwater use restrictions enforceable by a local government and/or regulatory agency, or by an environmental covenant with the state fire marshal;

(v) Points of exposure are eliminated by land use restrictions enforceable by a local government and/or regulatory agency, or by an environmental covenant with the state fire marshal.

(b) If the pathway cannot be determined to be incomplete according to the criteria listed in paragraph (L)(4)(a)(ii)(*a*) of this rule, the exposure pathway shall be considered complete.

(c) Land use restrictions.

Where points of exposure are eliminated based on a land use restriction, owners and operators shall enter into an environmental covenant with the state fire marshal in accordance with sections 5301.80 to 5301.92 of the Revised Code that is recorded in the county where the UST site is located for the purpose of restricting the land use to activities that are consistent with the land use determination. A copy of the ~~mechanism~~ environmental covenant used shall be provided with the Tier 2 Evaluation report.

(d) ~~Ground water~~ Groundwater use restrictions.

Where points of exposure are eliminated based on a ~~ground water~~ groundwater use restriction, owners and operators shall enter into an environmental covenant with the state fire marshal in accordance with sections 5301.80 to 5301.92 of the Revised Code that is recorded in the county where the UST site is located for the purpose of restricting the drinking water use to activities that are consistent with the ~~ground water~~ groundwater use determination. A copy of the ~~mechanism~~ environmental covenant used shall be provided with the Tier 2 Evaluation report.

(iii) Pathway evaluation conclusions.

(a) If an exposure pathway is determined to be complete in accordance with paragraph (L)(4)(a)(ii)(*b*) of this rule, then owners and operators shall evaluate points of exposure pursuant to paragraph (L)(4)(b) of this rule.

(b) If an exposure pathway is determined to be incomplete in accordance with paragraph (L)(4)(a)(ii)(*a*) of this rule, then no further evaluation will be required for that exposure pathway. The determination that an exposure pathway is incomplete shall be documented and based on information and data collected during the Tier 2

Evaluation.

(b) Points of exposure.

(i) Identify point(s) of exposure based on the current and reasonably anticipated future use at the UST site and in the surrounding area. At a minimum, all of the following potential point(s) of exposure shall be evaluated:

(a) Where ~~**ground water**~~ **groundwater** has been determined to be a drinking water source in accordance with paragraph (I)(2)(c) or (I)(2)(e) of this rule, the point of exposure shall be one of the following, whichever is closest to the source area(s):

(i) Any potable well located on the UST site;

(ii) The property line when the UST site is located in a ~~**Drinking Water Source Protection Area**~~ **drinking water source protection area**;

(iii) The ~~**Drinking Water Source Protection Area**~~ **drinking water source protection area** boundary if a ~~**Drinking Water Source Protection Area**~~ **drinking water source protection area** is within three hundred feet of the UST site;

(iv) The property line, unless one of the following can be demonstrated:

(A) No potable wells are located on or within three hundred feet of the UST site based on a physical survey and an ordinance requires a mandatory tie-in to a municipal water system for all properties in the surrounding area;

(B) No potable wells are located on or within three hundred feet of the UST site based on a physical survey and an ordinance prohibits the installation of potable water wells at all properties within the surrounding area; or

(C) No potable wells are located on or within three hundred feet of the UST site based on a physical survey and ~~**100**~~ **one hundred** percent of the properties within three hundred feet of the UST site are connected to a municipal water source or a municipal source is readily available;

(v) If the point of exposure is determined to be the property line in accordance with paragraph (L)(4)(b)(i)(*a*)(*ii*) or (L)(4)(b)(i)(*a*)(*iv*), and a roadway or railroad separates the source area from a property where a potable well could be installed, the point of exposure may be extended across the roadway or railroad to the property line of that property;

(vi) If a point of exposure has not been identified in paragraphs (L)(4)(b)(i)(*a*)(*i*) to (L)(4)(b)(i)(*a*)(*iv*) of this rule, the point of exposure shall be three hundred feet from the source area(s) or an alternate point of exposure approved by the state fire marshal; or

(vii) ~~**Not withstanding**~~ **Notwithstanding** paragraphs ~~**(L)(4(b)(i)(*a*)(*i*)**~~ **(L)(4)(b)(i)(*a*)(*i*)** to (L)(4(b)(i)(*a*)(*vi*), the state fire marshal may require that point(s) of exposure be evaluated other than or in addition to those specified in

paragraph (L)(4)(b) of this rule.

(b) Surface water where a surface water body exists within three hundred feet of the UST site;

(c) Residential and/or other buildings located or anticipated to be located above soil or ~~ground water~~ **groundwater** containing concentrations of chemical(s) of concern;

(d) Subsurface structures, such as utility manways and underground tunnels; and

(e) Surface and subsurface soil areas where:

(i) The current or reasonably anticipated future use is determined to be residential land use then a point of exposure for direct contact with surface soil shall be zero to ten feet below ground surface.

(ii) The current and reasonably anticipated future use is determined to be non-residential then a point of exposure for direct contact with surface soil shall be zero to two feet below ground surface.

(c) If the distribution of chemical(s) of concern cannot be defined on properties that are impacted or potentially impacted by the release, concentrations of chemical(s) of concern at the affected property boundary line(s) shall meet action levels appropriate to each property's land use determination.

(5) Site-specific target level development.

(a) Fate and transport of chemical(s) of concern above action levels that have complete exposure pathways shall be evaluated by conducting one or a combination of the following:

(i) Develop site-specific target levels by replacing default values specified by the state fire marshal for the geological, hydrogeological, and physical parameters in the algorithms used to develop action levels with site-specific values;

(ii) Utilize analytical fate and transport modeling, approved by the state fire marshal, to predict-concentrations of chemical(s) of concern at each point of exposure; or

(iii) Back calculate site-specific target levels by utilizing analytical fate and transport models, approved by the state fire marshal, from the point(s) of exposure to the source area for any complete pathway(s). The calculated site-specific target levels must be protective of human health and the environment at each point of exposure determined pursuant to paragraph (L)(4)(b) of this rule.

(b) The default values shall not be replaced by alternative literature values. Any non-default input data shall be representative of the UST site conditions.

(c) Proper documentation of the modeling work shall be prepared and submitted to the state fire marshal within the Tier 2 Evaluation report. The documentation shall include input values, assumptions and the results of the modeling. Model results must be reproducible by the state fire marshal.

(d) After determining site-specific target levels, the maximum concentrations of chemical(s) of concern for each complete exposure pathway shall be compared to the calculated site-specific target levels.

(e) Where site-specific target levels are developed based on land use other than residential land use and non-residential land use is not established in accordance with paragraph (L)(2)(a)(i) of this rule, owners and operators shall enter into an environmental covenant with the state fire marshal in accordance with sections 5301.80 to 5301.92 of the Revised Code to restrict the land use to activities that are consistent with the land use determination. A copy of the mechanism used shall be provided with the Tier 2 Evaluation report.

(f) Where site-specific target levels are developed based on ~~ground water~~ **groundwater** use other than drinking water use and non-drinking water use is not established in accordance with paragraph (I)(2)(d) of this rule, owners and operators shall enter into an environmental covenant with the state fire marshal in accordance with sections 5301.80 to 5301.92 of the Revised Code to restrict the drinking water use to activities that are consistent with the ~~ground water~~ **groundwater** use determination. A copy of the mechanism used shall be provided with the Tier 2 Evaluation report.

(6) Tier 2 decisions.

Upon submission of the Tier 2 Evaluation report, the state fire marshal will evaluate the submitted information for completeness and either issue a letter of approval or a letter requesting additional information, as appropriate. The maximum concentrations of chemical(s) of concern shall be compared to the action level or Tier 2 site-specific target levels, as applicable.

(a) If the concentrations of all chemical(s) of concern are at or below Tier 2 site-specific target levels for all pathways and no monitoring is required pursuant to paragraph (O) of this rule, then no further action is required. If required by paragraph (O) of this rule, a monitoring plan shall be developed for ~~ground water~~ **groundwater** and submitted with the Tier 2 Evaluation report, prepared in accordance with paragraph (L)(7) of this rule, to demonstrate that concentrations of all chemical(s) of concern will remain at or below Tier 2 site-specific target levels.

(b) If the concentration of a specific chemical of concern is at or below the Tier 2 site-specific target levels, then no further evaluation is necessary for that chemical of concern and for the corresponding complete exposure pathway.

(c) If the concentrations of chemical(s) of concern are above the Tier 2 site-specific target levels for one or more exposure pathways, then the owners and operators shall complete one or a combination of the following to address the chemical(s) of concern and the corresponding complete exposure pathways:

(i) An Interim Response Action, under paragraph (K) of this rule, may be implemented to eliminate a complete exposure pathway or to reduce concentrations of chemical(s) of concern in the source area(s) to a level at or below the Tier 2 site-specific target levels in accordance with paragraph (L) of this rule.

(ii) A Remedial Action Plan, pursuant to paragraph (N) of this rule, may be developed using the Tier 2 site-specific target levels for remedial action.

(iii) A Tier 3 Evaluation plan**,** ~~**in accordance with**~~ **pursuant to** paragraph ~~**(M)**~~**(M)(1)(a)** of this rule, may be developed ~~**and submitted with the Tier 2 Evaluation report**~~.

(iv) A plan for approval by the state fire marshal to calibrate or disprove the fate and transport model using additional site-specific data. This plan shall be submitted with the Tier 2 Evaluation report.

(7) Tier 2 Evaluation report.

(a) Owners and operators shall prepare and submit the Tier 2 Evaluation report to the state fire marshal, within eighteen months from the approval of the Tier 1 Investigation report:

(b) The Tier 2 Evaluation report shall include all of the following information:

(i) A summary of the maximum concentrations for all chemical(s) of concern in soil and ~~**ground water**~~ **groundwater**, the potential drinking water use determination, depth-to-~~**ground water**~~ **groundwater** and the soil class for each complete pathway determined during the Tier 1 Source Investigation and the Tier 1 Delineation activities;

(ii) Tier 2 Delineation documentation.

A summary of the Tier 2 Delineation data collection activities that includes, at a minimum, the following information*:*

(a) A summary of the rationale for sampling and testing locations;

(b) A description of the field methodologies employed, including instrument calibration techniques and the make and model of equipment used;

(c) A site map that accurately depicts the locations of current and historical underground storage tank system(s), property boundaries, street locations, above ground structures, underground utilities, on-site potable well(s) and soil.

(d) Drilling logs and well construction diagrams that include:

(i) Type of sampler used (e.g., Shelby tube, California sampler, split-spoon);

(ii) The presence of organic vapors as determined by field screening techniques;

(iii) A description of the presence of free product;

(iv) The location in decimal degrees accurate to within five feet of the actual location and reported to five decimal places;

(v) Depth at which saturated conditions were first encountered during drilling and the depth of the static water level;

(vi) A complete description of the soil sample for each sampling interval including;

(A) The color and moisture content*;*

(B) The USCS classification;

(C) The gradation consistency;

(D) A description of horizontal and/or vertical fracturing of bedrock encountered while drilling;

(E) The type and a description of bedrock with differentiation between weathered and competent bedrock;

(F) A description of any voids or significant pressure changes observed in bedrock drilling;

(G) A graphic illustration of each sample interval;

(H) A description of which soil sample interval(s) were sent to the laboratory for analysis; and

(I) The sample recovery for each interval in units of feet.

(e) Monitoring well sampling and development logs, documenting the number and quantity of well purging volumes, date, time and duration of collection and development.

(f) Depth-to-fluid, depth-to-water, free product thickness measurements, and top-of-casing and ~~**ground water**~~ **groundwater** elevations in tabular form for each well. When available, include historical data in the table and reference the source(s) of all information presented.

(g) A ~~**ground water**~~ **groundwater** elevation contour map using all relevant monitoring wells to establish ~~**ground water**~~ **groundwater** contour and flow direction and clearly indicating the dates that ~~**ground water**~~ **groundwater** measurements were collected. Justification for the exclusion of specific monitoring wells in the determination of flow direction, if applicable, shall be provided.

(h) The calculation of the hydraulic gradient;

(i) Analytical laboratory results including:

(i) Laboratory analyses in tabular form, by environmental medium, including applicable action levels. Present current results along with historical results, when available. Indicate sample collection date(s) and reference source(s) of all information presented. All tables shall include the corresponding method detection limit for each analysis that was below detection limits; and

(ii) All analytical results, QA/QC procedures and data quality objectives including, without limitation, all laboratory certificates of analysis (data sheets), completed chain-of-custody forms indicating soil boring and/or monitoring well numbers and laboratory sample numbers.

(j) Chemical(s) of concern concentration maps for soil in units of milligrams per

kilogram (mg/kg) and ~~ground water~~ **groundwater** in units of milligrams per liter (mg/l). Maps shall include the location of sampling points, the depth of each soil sample interval, and the location of each source area(s). Maps shall include historical soil and ~~ground water~~ **groundwater** results for the release being investigated. Maps that include ~~ground water~~ **groundwater** data may be limited to the most recent four sampling events unless directed by the state fire marshal.

(k) Documentation regarding off-site access pursuant to paragraph (L)(1)(d) of this rule, as appropriate.

(iii) Land use determination documentation including:

(a) A map depicting the land use of the UST site and all surrounding properties within three hundred feet of the UST site; and

(b) Supporting documentation and a summary of the land use determination conducted pursuant to paragraph (L)(2) of this rule.

(iv) Land and ~~ground water~~ **groundwater** use restrictions including:

(a) A discussion of land and ~~ground water~~ **groundwater** use restrictions documenting the source(s) of all information that details the restriction(s); and

(b) Provide a copy of all ordinances, recorded land and ~~ground water~~ **groundwater** use restriction documents and recorded environmental covenants.

(v) Site conceptual exposure model documentation.

Provide a summary of the pathway evaluation as developed in paragraph (L)(4)(a) and the point(s) of exposure in paragraph (L)(4)(b) of this rule. All sources of information in the report shall be documented.

(vi) Documentation of site-specific target level development.

Provide a summary of the activities conducted, the results of the Tier 2 Evaluation and a description of models or other methods used to determine site-specific target levels. The summary shall include the following:

(a) A description of any models used to evaluate data pursuant to paragraphs (L)(5)(a) and (L)(5)(b) of this rule that provides all assumptions, input parameters and output values;

(b) Present maximum concentration of chemical(s) of concern, action levels and site-specific target levels in tabular form by environmental media and exposure pathway;

(c) Present results of geotechnical testing for soil properties in tabular form referencing the ASTM method used to perform each test. At a minimum, the following information shall be included:

(i) Drilling logs;

(ii) Equipment and standard procedures used;

(iii) Analytical results, QA/QC procedures and data quality objectives including, without limitation, all laboratory certificates of analysis (data sheets), completed chain-of-custody form(s) indicating soil boring/monitoring well numbers and laboratory sample numbers; and

(iv) A site map showing the location(s) of geotechnical soil borings.

(d) A summary and documentation of any field investigations conducted to collect site-specific data.

(vii) A summary of the Interim Response Actions conducted pursuant to paragraph (K) of this rule, including the volume of soil removed and/or ~~**ground water**~~ **groundwater** treated.

(viii) A summary of future actions and alternatives, including:

(a) A discussion of remedial actions, if appropriate;

(b) A discussion of further tier analysis, if appropriate;

(c) A summary of monitoring events, as appropriate; and

(d) A discussion of interim response actions including the volume of soil removed and/or ~~**ground water**~~ **groundwater** treated.

(M) Tier 3 Evaluation.

(1) Tier 3 Evaluation plan.

(a) If site-specific target levels are to be developed under a Tier 3 Evaluation, then a Tier 3 Evaluation plan shall be prepared and submitted to the state fire marshal within ninety days of approval of the Tier 2 Evaluation pursuant to paragraph (L)(7)(a) of this rule. Unless otherwise provided in this rule, this plan shall include all the following:

(i) A description of the objective of the Tier 3 Evaluation and the activities to be conducted;

(ii) A discussion of the effectiveness, cost and the rationale for selecting the Tier 3 Evaluation compared to other remedial action alternatives; and

(iii) An implementation schedule and the projected completion date of the proposed Tier 3 Evaluation.

(b) Upon approval of the Tier 3 Evaluation plan by the state fire marshal, owners and operators shall conduct the activities in accordance with the approved Tier 3 Evaluation plan.

(2) Public participation.

(a) For each confirmed release for which a Tier 3 Evaluation plan is submitted to the state fire marshal, the owners and operators shall provide notice to the public in a format approved by the state fire marshal by means designed to reach those members of the public directly

affected by the release and the planned Tier 3 Evaluation. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, ~~publication in a state register,~~ certified letters to individual households and businesses, or personal contacts by field staff. Owners and operators shall submit proof of public notice to the state fire marshal within ninety days of the date of the public notice request.

(b) The state fire marshal shall ensure that the UST site release information and decisions concerning the Tier 3 Evaluation plan are made available to the public for inspection upon request.

(c) Before approving a Tier 3 Evaluation plan, the state fire marshal may hold a public meeting to consider comments on the proposed Tier 3 Evaluation plan if there is sufficient public interest, or for any other reason.

(3) Tier 3 decisions.

(a) If the concentration of a particular chemical(s) of concern is at or below the Tier 3 site-specific target levels, then no further action is necessary for that chemical of concern and for the corresponding complete exposure pathway. If required by paragraph (O) of this rule, a monitoring plan shall be developed for ~~ground water~~ groundwater and submitted with the Tier 3 Evaluation report prepared in accordance with paragraph (M)(4) of this rule to demonstrate that concentrations of chemical(s) of concern will remain at or below Tier 3 site-specific target levels.

(b) If the concentrations of chemical(s) of concern are above the Tier 3 site-specific target levels, then the owners and operators shall conduct one or a combination of the following:

(i) An Interim Response Action may be implemented, in accordance with paragraph (K) of this rule, to eliminate a complete exposure pathway or to reduce concentrations of chemical(s) of concern at the source area(s) to at or below the site-specific target levels; or

(ii) The Tier 3 site-specific target level values may be used as target levels for remedial action and a Remedial Action Plan developed pursuant to paragraph (N) of this rule.

(4) Tier 3 Evaluation report.

Within ninety days from the projected completion date stated in the approved Tier 3 Evaluation plan a report summarizing the activities conducted in accordance with the Tier 3 Evaluation plan developed in paragraph (M)(1) of this rule and the results of the Tier 3 decisions described in paragraph (M)(3) of this rule shall be submitted to the state fire marshal for approval.

(N) Remedial Action.

(1) Remedial Action Plan

A Remedial Action Plan shall be prepared and submitted to the state fire marshal within ninety days of approval of the Tier 1 Investigation report pursuant to paragraph (I)(4) of this rule, approval of the Tier 2 Evaluation pursuant to paragraph (L)(7)(a) of this rule or approval of the Tier 3 Evaluation report pursuant to paragraph (M)(4) of this rule. The Remedial Action Plan

shall include, at a minimum, all of the following information:

(a) A description of the remedial action program to be implemented;

(b) Proposed targets levels, identified by chemical(s) of concern and environmental media;

(c) A conceptual design of the remedial action system, detailed engineering drawings are not necessary;

(d) A brief description of remedial action alternatives considered, including a discussion of the reliability, effectiveness, cost, and time needed for completion, and the rationale for the selected program;

(e) A Monitoring Plan, prepared in accordance with paragraph (O) of this rule, describing monitoring to be used to determine whether site-specific target levels are being achieved and to demonstrate that concentrations of chemical(s) of concern will remain at or below site-specific target levels, including locations of any monitoring wells designated for sampling;

(f) A description of reporting frequency and proposed content of reports;

(g) A description of all permits or other governmental approvals required for implementation of the plan;

(h) A description of activities and studies, if any, required to be performed prior to implementation of the proposed remedial action; and

(i) An implementation schedule, projected completion date and the submittal date for the completion report of the proposed remedial action.

(2) Public participation.

(a) For each release for which a Remedial Action Plan is submitted to the state fire marshal, the owners and operators shall provide notice to the public in a format approved by the state fire marshal by means designed to reach those members of the public directly affected by the release and the planned remedial 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,**~~ **certified** letters to individual households **and businesses**, or personal contacts by field staff. **Owners and operators shall submit proof of public notice to the state fire marshal within ninety days of the date of the public notice request.**

(b) The state fire marshal shall ensure that the UST site release information and decisions concerning the Remedial Action Plans are made available to the public for inspection upon request.

(c) Before approving a Remedial Action Plan, the state fire marshal may hold a public meeting to consider comments on the proposed Remedial Action Plan if there is sufficient public interest or for any other reason.

(d) The owners and operators shall give public notice that complies with paragraph (N)(2)(a) of this rule if implementation of an approved Remedial Action Plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by

the state fire marshal.

(3) Implementation of Remedial Action Plans.

(a) Upon approval of the Remedial Action Plan, owners and operators shall implement the plan. Owners and operators shall monitor, evaluate, and report to the state fire marshal the results of implementation efforts.

(b) If the treatment technology approved by the state fire marshal in the plan has been installed and operated for the time frame specified in the approved Remedial Action Plan and the technology is unable to reduce the concentration of chemical(s) of concern to a level at or below action or site-specific target levels, then the owners and operators shall:

(i) Re-evaluate the remedial action alternatives and submit a revised Remedial Action Plan;

(ii) Re-evaluate the assumptions and parameters used to develop the target levels, as appropriate.

(4) Completion report.

Following completion of remedial action in accordance with this rule, owners and operators shall prepare and submit a completion report no later than the submittal date provided in the approved plan. The completion report must demonstrate the remedial action objectives have been met. The report shall contain documentation supporting termination of the remedial action program. Upon approval of the report, the state fire marshal shall issue to the owners and operators written notice that no further action is required.

(O) Monitoring Plan.

(1) Purpose.

(a) A monitoring plan shall be developed as appropriate to:

(i) Demonstrate that no further action is appropriate in accordance with paragraphs (L)(6) and (M)(3) of this rule;

(ii) Demonstrate that a remedial action completed in accordance with paragraph (N) of this rule has achieved target levels; and

(iii) Verify fate and transport model assumptions and predictions related to the development of site-specific target levels pursuant to paragraph (L)(5) of this rule. Historical data may be used to verify model assumptions and predictions or to reduce the time period of the monitoring plan.

(b) The monitoring plan shall include, at a minimum, all of the following information:

(i) A description of the purpose and objective of the monitoring activity;

(ii) A description of monitoring activities to be conducted, including those conducted to implement engineering controls;

(iii) The location of the point(s) of demonstration and point(s) of exposure;

(iv) A summary of sampling procedures;

(v) A description of the anticipated length and frequency of the monitoring activity;

(vi) An identification and description of the criteria to be used for termination of the Remedial Action Plan or monitoring activity, as appropriate; and

(vii) Criteria to be used for verifying ~~ground water~~ **groundwater** fate and transport model assumptions and predictions. The model assumptions shall be validated with empirical data collected from point(s) of demonstration.

(c) If the objectives of the monitoring plan have been met, then owners and operators shall submit a completion report within ninety days after receiving analytical results of the last monitoring plan sampling event and in accordance with paragraph (O)(3) of this rule. If the objectives of the monitoring plan have not been met, then the owners and operators shall conduct one or more of the following within ninety days after receiving analytical results of the last monitoring plan sampling event:

(i) Continue monitoring activities with state fire marshal approval;

(ii) Conduct an Interim Response Action in accordance with paragraph (K) of this rule;

(iii) Develop a Remedial Action Plan in accordance with paragraph (N) of this rule; or

(iv) Re-evaluate the assumptions and parameters used to develop site-specific target levels.

(2) Point(s) of demonstration.

The monitoring plan shall include a point(s) of demonstration between the source area and the point of exposure and be submitted with the Tier 2 Evaluation report, Remedial Action Plan or Tier 3 Evaluation report.

The process for the selection of the point(s) of demonstration shall consider the location of the point(s) of exposure including the receptor and exposure route, the transport mechanism (e.g., ~~ground water~~ **groundwater** migration, vapor migration) and the estimated travel time from the source to the point(s) of exposure. The point(s) of demonstration shall be located to monitor the progress of the remedial action (including natural attenuation) and to verify the predictions related to the potential fate and transport of the chemical(s) of concern. The point(s) of demonstration shall be located sufficiently upgradient of the point(s) of exposure to indicate whether continued migration of the chemical(s) of concern may impact the point(s) of exposure above the applicable action levels.

(3) Completion report.

Following completion of monitoring in accordance with paragraphs (O)(1) and (O)(2) of this rule, owners and operators shall prepare a completion report that demonstrates the monitoring objectives have been met. The report shall contain documentation supporting termination of the monitoring plan. Upon approval of the report, the state fire marshal shall issue to the owners and operators written notice that no further action is required.

(P) Petroleum contaminated soil.

The storage, treatment and disposal of petroleum contaminated soil generated from corrective actions undertaken pursuant to this rule shall be in accordance with rule 1301:7-9-16 of the Administrative Code.

(Q) Requests for extensions.

If owners and operators desire an extension of time in which to comply with any portion of this rule, the owner and operator shall:

(1) Prepare a written request on a form prescribed by the state fire marshal, signed by the owners and operators, setting forth the following:

(a) The date the information was to be submitted;

(b) The reasons for requesting the extension;

(c) The length of time that the extension is requested for;

(d) The name and complete address of the UST site that is the subject of the extension request; **and**

(e) ~~**The name of the state fire marshal employee that is assigned to monitor the corrective actions activities at the UST site; and**~~

~~**(f)**~~ The release number, assigned by the state fire marshal, for the UST site that is the subject of the extension request.

(2) Submit a written request in accordance with paragraph (Q)(1) of this rule to the state fire marshal prior to the expiration of the time period that is the subject of the extension request. Submission of the written request required by paragraph (Q)(1) of this rule is accomplished only upon the actual receipt of the request by the state fire marshal. The state fire marshal may grant, modify, or deny any extension request at his sole discretion.

(R) Alternative methodologies and technologies.

(1) Methodologies and technologies other than those specified in this rule may be used if the owner and operator:

(a) Demonstrates to the state fire marshal that the alternative methodology or technology is at least as effective as those required by this rule; and

(b) Obtains written approval from the state fire marshal to use the alternative methodology or technology before the actual implementation of such methodology or technology. If the alternative methodology or technology is approved by the state fire marshal, the owner and operator using such an alternative methodology or technology shall comply with any conditions imposed by the state fire marshal on ~~it~~ its use.

(2) The state fire marshal may approve the alternative methodology or technology for use at a

specific UST site or for use at all UST sites. If the state fire marshal approves an alternative methodology or technology for use at all UST sites, the owners and operators must comply with any conditions imposed by the state fire marshal on the use of the alternative methodology or technology.

(3) Notwithstanding paragraphs (R)(1) and (R)(2) of this rule, if a covenant not to sue is issued by the director of the environmental protection agency in accordance with sections 3737.88(A)(3) and 3746.12 of the Revised Code, no further action is required.

(S) Voluntary corrective action.

(1) Any person having a legal, equitable or possessory interest in a parcel of property may undertake voluntary corrective action in response to a release or suspected release from a UST system containing petroleum.

(2) Upon demonstration that the applicable standards established by this rule have been met, the state fire marshal shall issue the person that undertook voluntary corrective action written notice that no further corrective action is required.

(3) Written notice issued pursuant to paragraph (S)(2) of this rule that no further corrective action is required shall not be construed in any manner to suggest that the person completing voluntary corrective action has thereby assumed any liability or responsibility for the release or suspected release of petroleum, or for any residual contamination that may remain at the property.

(4) Any determination by the state fire marshal for the purpose of assisting voluntary corrective action does not release any owner or operator from any obligations under sections 3737.87 to 3737.89 of the Revised Code and the regulations adopted thereunder, or effect any other rights under the citizen suits provision of the Resource Conservation and Recovery Act of 1976, 90 Stat. 2795, 42 U.S.C.A. 6901, as amended. The state fire marshal reserves all enforcement and remedy rights available under the law.

1301:7-9-14 **Voluntary corrective action.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish standards for voluntary corrective action. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the Ohio Fire Code.

(B) Definitions.

(1) "Voluntary corrective action" means any and all corrective action undertaken by a person who is not an owner or operator, as those terms are defined in section 3737.87 of the Revised Code, or otherwise potentially liable for the costs of corrective action pursuant to section 3737.89 of the Revised Code in response to a release or suspected release from a petroleum UST system for the purpose of meeting applicable standards established by rules adopted pursuant to division (B) of section 3737.882 of the Revised Code.

(C) Voluntary corrective action.

(1) Any person having a legal, equitable or possessory interest in a parcel of property may undertake voluntary corrective action in response to a release or suspected release from a UST system containing petroleum.

(2) Upon demonstration that the applicable standards established by rules adopted pursuant to division (B) of section 3737.882 of the Revised Code have been met, the state fire marshal shall issue the person that undertook voluntary corrective action written notice that no further corrective action is required.

(3) Written notice issued pursuant to paragraph (C)(2) of this rule that no further corrective action is required shall not be construed in any manner to suggest that the person completing voluntary corrective action has thereby assumed any liability or responsibility for the release or suspected release of petroleum, or for any residual contamination that may remain at the property.

(D) Effect on other laws.

(1) Nothing in this rule affects any liability or response authority under any federal or state law, including, but not limited to:

(a) The Comprehensive Environmental Response Compensation, and Liability Act (42 U.S.C. 9601 et seq.);

(b) The Solid Waste Disposal Act (42 U.S.C. 6901 et seq.);

(c) The Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.);

(d) The Toxic Substances Control Act (15 U.S.C. 2601 et seq.); and

(e) The Safe Drinking Water Act (42 U.S.C. 300f et seq.).

~~The federal laws listed in this paragraph are those versions of the laws amended through January 7, 2011.~~

~~(2) Any determination by the state fire marshal for the purpose of assisting voluntary corrective action at a petroleum brownfields site does not release any responsible person from any obligations under sections 3737.87 to 3737.89 of the Revised Code and the regulations adopted thereunder, or effect any other rights under the citizen suits provision of the Resource Conservation and Recovery Act of 1976, 90 Stat. 2795, 42 U.S.C.A. 6901, as amended. The state fire marshal reserves all enforcement and remedy rights available under the law.~~

1301:7-9-15 **Delegation of authority to inspect UST systems.**

(A) Purpose and scope.

(1) For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish procedures for delegating to certified fire safety inspectors, as defined in division (D) of section 3737.01 of the Revised Code, the authority to issue delegated UST permits and inspect UST systems for compliance with chapter 1301:7-9 of the Administrative Code. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

~~(1)~~**(2)** Any individual who has been delegated by the state fire marshal to conduct UST inspections for compliance with chapter 1301:7-9 of the Administrative Code in accordance with paragraph (F) of this rule ~~are~~ **is** restricted to ~~inspect~~ **inspecting** those activities requiring a permit as listed in paragraph (C) of rule 1301:7-9-10 of the Administrative Code.

(B) Delegation of authority to local fire agencies to issue permits and perform UST inspections.

(1) Any local fire agency wishing to have the state fire marshal delegate to its certified fire safety inspectors the authority to conduct inspections and issue permits for underground storage tank systems shall submit a written application to the state fire marshal. All applications shall be on a form prescribed and furnished by the state fire marshal and shall include, without limitation, all of the following:

(a) A list of certified fire safety inspectors within the agency who have been issued a certificate to inspect UST systems under paragraph (F) of this rule that will be assigned to conduct UST system inspections;

(b) A copy of the local ordinance or resolution which authorizes the agency to perform inspections and issue written permits for those situations identified in paragraph (C)(3) of this rule within the agency's jurisdictional area;

(c) A map or description of all political subdivisions depicting the agency's jurisdictional area; and

(d) The name, address, and telephone number of the agency's UST inspection coordinator as designated by the chief of the agency.

(2) The **state** fire marshal shall review all applications. If the state fire marshal determines that the local fire agency has the necessary authority, the state fire marshal may delegate to the agency's certified fire safety inspectors the authority to inspect and issue UST permits for UST systems as limited by this rule.

(a) Local fire agencies which have been delegated authority pursuant to this rule shall retain copies of all permits issued pursuant to paragraph (B)(4) of this rule and all inspection reports prepared within its jurisdictional area pursuant to paragraph (I) of this rule. The local fire agency shall deliver a copy of all UST permits and all inspection reports to the **state** fire marshal within thirty days of the final inspection.

(b) If a local fire agency which has been delegated authority pursuant to this rule determines that any violation of this chapter exists, that a condition of ~~a~~ an UST permit has been violated, or that there has been any false statement or misrepresentation of a material fact on the UST permit application or supporting documentation, the local fire agency shall initiate UST permit revocation proceedings. To initiate revocation proceedings, the local fire agency shall inform the state fire marshal in writing of the proposed UST permit revocation and the reason for the proposed revocation. Upon such notification, the state fire marshal may revoke the UST permit in compliance with chapter 119 of the Revised Code.

(c) The state fire marshal shall retain any and all authority to bring an action against the responsible person for any violation of this chapter or section 3737.882 of the Revised Code.

(d) The state fire marshal shall retain the authority to revoke any authority delegated pursuant to this rule upon a determination by the state fire marshal that a local fire agency's certified fire safety inspector authorized to perform UST inspections pursuant to paragraph (F) of this rule failed to adequately inspect UST systems within the local fire agency's jurisdiction, failed to keep adequate records, failed to properly apply this chapter, or failed to comply with any requirements of this rule.

(3) Local fire agencies which have been delegated authority pursuant to this rule to conduct UST inspections for compliance with chapter 1301:7-9 of the Administrative Code are subject to all of the following:

(a) The authority of a certified fire safety inspector authorized to perform UST inspections pursuant to paragraph (F) of this rule shall be limited to the duties identified in paragraph (C) of this rule and to the following:

(i) Such inspectors may approve or deny an extension of the twelve month out of service period within their jurisdictional area in accordance with paragraphs (E)(4) and (E)(6) of rule 1301:7-9-12 of the Ohio Administrative Code. All approvals and denials shall be in writing and a copy shall be delivered to the state fire marshal within thirty days of issuance.

(ii) Such inspectors may approve or deny the closure-in-place of an UST system within their jurisdictional area in accordance with paragraph (F) of rule 1301:7-9-12 of the Ohio Administrative Code. All approvals and denials shall be in writing and a copy shall be delivered to the state fire marshal within thirty days of issuance.

(b) Certified fire safety inspectors authorized to conduct UST system inspections pursuant to paragraph (F) this rule shall comply with the operational and reporting requirements set forth in paragraph (I) of this rule.

(c) UST inspections shall be performed by certified fire safety inspectors within the agency as listed in paragraph (B)(1)(a) of this rule. The local fire agency may allow other UST inspectors certified pursuant to paragraph (F) of this rule to conduct inspections within its jurisdictional area at its discretion and if not prohibited by local ordinance.

(d) The state fire marshal retains the authority to conduct inspections within the jurisdiction of

any local fire agency that has been delegated the authority to conduct inspections under this rule.

(e) Certified fire safety inspectors conducting UST system inspections pursuant to paragraph (F) of this rule shall be limited in the inspections they are allowed to conduct as set forth in paragraph (H) of this rule, except that certified fire safety inspectors assigned to conduct UST inspections within the jurisdictional area of the local fire agency may also conduct UST system inspections of USTs owned by the political subdivision where the local fire agency has jurisdiction.

(4) Local fire agencies which have been delegated authority pursuant to this rule shall issue ~~a~~ **an** UST permit in a form prescribed and provided by the state fire marshal to those responsible persons who have submitted a completed UST permit application. UST permits shall be issued in accordance with paragraph (C) of rule 1301:7-9-10 of the Administrative Code.

(a) No local fire agency shall issue any UST permit pursuant to this rule unless it has been delegated the authority to do so in writing by the state fire marshal.

(b) A local fire agency which has been delegated authority pursuant to this rule shall issue permits for UST systems only within its jurisdictional area.

(c) A local fire agency may determine a reasonable fee for all UST permits and permit related inspections, if any, within its jurisdiction.

(d) Any permit issued by a local fire agency shall not be construed as authority to violate any provision of this chapter.

(e) If a local fire agency which has been delegated authority pursuant to this rule determines that ~~a~~ **an** UST permit application is incomplete, that there has been a false statement or misrepresentation of a material fact on the UST permit application or supporting documentation, or that the proposed activity is in violation of this chapter, the local fire agency shall initiate permit application denial proceedings. To initiate denial proceedings, the local fire agency shall inform the state fire marshal in writing of the proposed denial and the reason for the proposed denial. Upon such notification, the state fire marshal may deny the UST permit application in compliance with Chapter 119 of the Revised Code.

(C) Duties of certified UST inspectors conducting permit inspections**.**

(1) Any individual who has been certified by the state fire marshal to conduct UST inspections in accordance with paragraph (F) of this rule may inspect the activity for which a UST permit has been issued.

(2) As part of an UST permit inspection, under no circumstances shall a certified UST inspector enter a confined space as defined in 29 CFR 1910.146, as published in the July 1, ~~**2011**~~ **2016**, Code of Federal Regulations.

(3) A certified UST inspector shall be physically on site for all of the following activities:

(a) In the case of an UST installation ~~**or replacement**~~, the pre-installation pressure test of the UST, the examination of the excavation prior to the physical placing of the UST into the

ground, the backfilling of the UST, the in ground test of the piping and ancillary equipment prior to backfilling, the final tightness test of the UST system and the test of the release detection system prior to placing the UST system into service;

(b) In the case of an UST modification, immediately before purging operations begin, immediately before the UST is cut open for entry, the final tightness test of the UST and the final test of the UST leak detection system prior to placing the UST system back into service;

(c) In the case of a modification for piping, **the actual purging, removal, and cleaning of the piping or any of its components,** the in-ground test of the piping prior to backfilling the piping, the final tightness test of the modified portion of the piping and the final test of the piping leak detection system, if applicable, prior to placing the UST system back into service;

(d) In the case of a modification of other UST components, **the actual purging, removal, and cleaning of components,** the in-ground test of the component prior to backfilling the component, the final tightness test of the UST system and the final test of any leak detection systems, if applicable, prior to placing the UST system back into service;

(e) In the case of a major repair of an UST, immediately before purging operations begin, immediately before the tank is cut open for entry, the final tightness test of the UST and the final test of the UST leak detection system prior to placing the UST system back into service;

(f) In the case of a major repair of piping, **the actual purging, removal, and cleaning of the piping or any of its components,** the in-ground test of the piping prior to backfilling the piping, the final tightness test of the piping and the final test of the piping leak detection system, if applicable, prior to placing the UST system back into service;

(g) In the case of a major repair of other UST components, **the actual purging, removal, and cleaning of components,** the in-ground test of the component prior to backfilling the component, the final tightness test of the component and the final test of any leak detection systems, if applicable, prior to placing the UST system back into service;

(h) In the case of ~~**an UST**~~ removal **of UST systems or any of its components**, immediately before purging operations begin, immediately before the tank is cut open for any purpose, the actual removal of the UST system **or any of its components** from the ground and the final disposition of the UST before the UST leaves the site;

(i) In the case of closure-in-place of an UST system, immediately before purging operations begin, immediately before the opening of the tank top, **immediately during any removal or closure-in-place of piping and ancillary equipment,** and at the completion of the actual filling of the tank with inert solid material before covering the UST;

(j) In the case of the placing of an UST system out of service for more than ninety days, immediately before the UST, piping and ancillary equipment are secured; and

(k) In the case of the performance of a change in service of an UST system, immediately before purging operations begin and during any removal or closure-in-place of piping and

ancillary equipment**, if applicable**.

(4) Any inspector certified to inspect UST systems under paragraph (F) of this rule who observes activity that is in conflict with normal work or safety requirements referenced by this chapter shall immediately notify the certified UST installer of the activity. If the certified UST installer fails to correct the activity in a timely manner, the certified UST inspector shall instruct the certified UST installer to secure the UST system in a safe manner and to cease all UST related work. The certified UST inspector shall immediately notify the state fire marshal, and work shall not resume until approval is given by the state fire marshal.

(D) ~~Application~~ **New application** and examination requirements for an UST inspector.

Any individual who wishes to apply to become certified as an UST inspector shall meet all of the following application requirements:

(1) The applicant shall submit a complete application to the state fire marshal, on a form prescribed and furnished by the state fire marshal, accompanied by a non-refundable examination fee of twenty-five dollars. The state fire marshal shall also assess the applicant any fee charged by the superintendent of the bureau of criminal identification and investigation for the results of a background check to the applicant;

(2) The applicant shall be an individual and shall be at least eighteen years of age;

(3) If the applicant is not a resident of Ohio, the applicant shall provide an irrevocable consent to legal service from Ohio on a form prescribed and furnished by the **state** fire marshal;

(4) The applicant shall demonstrate compliance with one of the following:

(a) Has obtained a certificate of completion from an UST installer training program pursuant to paragraph (M)(3) or (M)(9) of rule 1301:7-9-11 of the Administrative Code; or

(b) Is a certified UST installer;

(5) The applicant shall be a certified fire safety inspector as that term is defined in division (D) of section 3737.01 of the Revised Code~~.~~**;**

(6) The applicant has not been convicted of a felony;

(7) The applicant shall not have had any authorization to act as a certified UST inspector pursuant to this rule previously revoked by the state fire marshal;

(8) The applicant shall complete an UST inspector training program in accordance with paragraph (E) of this rule and submit an application to become a certified UST inspector under paragraph (D)(1) of this rule within one year of completing the UST inspector training program; and

(9) The applicant shall satisfactorily pass the UST inspector examination.

(a) The examination shall be a written multiple-choice examination covering all aspects of the inspection of the installation, replacement, repair, closure-in-place, removal, modification, placing out of service, and performing a change in service of underground storage tank

systems. The exam shall also cover knowledge of sections 3737.88 to 3737.882 of the Revised Code, this chapter of the Administrative Code, current technological and industry recommended practices with respect to the proper installation, replacement, repair, closure-in-place, removal, modification, placing out of service, and performing a change in service of UST systems. An applicant may request permission to take the examination in oral form for good cause shown, as determined by the state fire marshal.

(b) To satisfactorily pass the examination, the applicant shall obtain a minimum score of seventy-five per cent on the exam. Any applicant who fails an examination may request re-examination upon payment of a non-refundable twenty-five dollar fee. An application for re-examination will remain pending for that purpose for a period of one year after the date the application was submitted. If the applicant has not requested re-examination within the one year period, the applicant must file a new application for certification with the state fire marshal.

(c) The examination shall be offered by and at the discretion of the state fire marshal at such places as the state fire marshal determines. The state fire marshal shall announce the time and location of an examination at least twenty days in advance of the exam and shall, at least seven days in advance of the exam, provide notice of the exam to all persons who have completed applications for certification since the date of the previous examination.

(d) Only persons who have filed applications and submitted fees in accordance with paragraph (D)(1) or (G)(1)(a) of this rule are eligible to take the examination.

(e) All examinations will be graded and the applicants notified of the results within twenty days of the date of the examination. Examinations will not be returned to the applicant, but may be reviewed by the applicant at the office of the state fire marshal or alternate locations as approved by the state fire marshal.

(E) UST inspector training and continuing education programs.

(1) The state fire marshal may conduct certified UST inspector training and continuing education programs. Any such program shall include appropriate instructional methods and written pre-test and post-test examinations, as determined by the state fire marshal.

(2) Any individual who wishes to attend a certified UST inspector training or continuing education program shall submit a complete application to the state fire marshal, on a form prescribed by the state fire marshal, accompanied by a non-refundable fee established by the state fire marshal, prior to the first scheduled day of the training program.

(3) Attendance shall be required at all classroom sessions except for valid reasons. The faculty is authorized to determine the validity of absences. Any absentee from any scheduled classroom session shall make up such attendance as required by the faculty.

(4) Upon conclusion of any certified UST inspector training or continuing education program, the state fire marshal shall issue a certificate of completion to all persons who complied with all of the following requirements:

(a) Attended all of the program's sessions or complied with paragraph (E)(3) of this rule;

(b) Submitted an application and fee to the state fire marshal pursuant to paragraph (E)(2) of this rule; and

(c) Successfully completed the program's pre-test and post-test examinations.

(F) Certification to inspect UST systems.

(1) The state fire marshal shall issue a certification to inspect UST systems to each applicant who meets the requirements of paragraph (D) of this rule. The certification to inspect shall be valid for **three** ~~two~~ years following the date of issuance by the state fire marshal.

(2) Individuals possessing valid certifications to inspect UST systems prior to March 1, 2005, may continue to perform UST inspections in accordance with this rule provided that the individual renews the certification to inspect in accordance with paragraph (G) of this rule.

(3) Any certified fire safety inspector that has been assigned on or before December 31, 1996, to conduct UST system inspections by a local fire agency that has been delegated authority pursuant to this rule and is on the list submitted to state fire marshal pursuant to paragraph (B)(1)(a) of this rule may continue to conduct UST system inspections within the jurisdictional area of the local fire agency.

(a) The state fire marshal shall issue a certification to inspect UST systems to each fire safety inspector who meets the requirements of **this** paragraph ~~(F)(3) of this rule~~. The certifications to inspect shall be valid for **three** ~~two~~ years following the effective date of this rule and shall limit the fire safety inspector to the jurisdictional area of the local fire agency where assigned.

(b) Each fire safety inspector who meets the requirements of **this** paragraph ~~(F)(3) of this rule~~ shall comply with paragraph (G) of this rule for renewal of certification to inspect UST systems.

(c) The authority of a certified fire safety inspector to inspect UST systems in accordance with **this** paragraph ~~(F)(3) of this rule~~ shall end upon separation of the inspector from the local fire agency.

(G) Renewal of certification to inspect UST systems.

(1) Certifications to inspect UST systems shall be renewed every **three** ~~two~~ years following the date of issuance by the state fire marshal. **No less than ninety days prior to expiration of a certification, the state fire marshal shall send a renewal application to the certification holder at the latest address indicated on file.** Any individual certified to inspect UST systems pursuant to this rule who wishes to apply for renewal of a certification to inspect shall meet all of the following renewal requirements:

(a) ~~Within thirty days prior~~ **Prior** to the expiration date of the certification to inspect, submit a certification to inspect renewal form to the state fire marshal on a form prescribed by and available from the state fire marshal accompanied by a non-refundable fee of twenty-five dollars; **and**

(b) Demonstrate in a manner prescribed by the state fire marshal attendance at all courses

required under paragraph (G)(3) of this rule.~~; and~~

~~(c) Demonstrate one of the following:~~

~~(i) The certified UST inspector conducted a minimum of six UST inspections on separate permits pursuant to the certification to inspect that is sought to be renewed; or~~

~~(ii) The certified UST inspector is listed in accordance with paragraph (B)(1)(a) of this rule as a certified fire safety inspector assigned to conduct UST system inspections by a local fire agency that has been delegated authority pursuant to this rule.~~

(2) ~~Any certified fire safety inspector who previously failed to meet the renewal requirements for certification to inspect UST systems may seek renewal of certification to inspect from the fire marshal provided that the following conditions are met:~~

~~(a) The applicant submits a certification to inspect renewal form to the state fire marshal in accordance with paragraph (G)(1)(a) of this rule on or before December 31, 2005;~~

~~(b) The applicant demonstrates compliance with the requirements of paragraph (G)(1)(b) and (G)(1)(c)(ii) of this rule; and~~

~~(c) The applicant satisfactorily passes the UST inspector exam described in paragraph (D)(9) of this rule.~~

~~(3)~~ Upon a determination by the state fire marshal that substantial changes have been made to sections 3737.87 to 3737.882 of the Revised Code, this chapter of the Administrative Code, or UST technology, the state fire marshal may require applicants for renewal of certifications to inspect UST systems to complete a continuing education course as specified by the state fire marshal as a condition of renewal of certification. The state fire marshal shall develop the continuing education course pursuant to paragraph (E) of this rule and shall notify all certified UST inspectors, in a timely fashion, of the continuing education requirement, the location, dates and times when the course will be offered.

~~(4)~~(3) The state fire marshal shall renew a certification to inspect UST systems for each applicant who meets the applicable requirements of ~~paragraphs~~ paragraph (G)(1) ~~and (G)(2)~~ of this rule. The renewal of a certification to inspect shall be valid for three ~~two~~ years following issuance by the state fire marshal.

~~(5)~~(4) The state fire marshal may grant a variance from the timely submittal of renewal applications if the applicant demonstrates good cause as determined by the state fire marshal.

(5) After expiration of a certification, any application for renewal will be considered as a new application and the applicant shall be required to pass an examination as defined in paragraph (D)(9) of this rule prior to certification.

(H) Limitations on authority to inspect.

(1) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the

installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems where that certified inspector performed work on the UST system being inspected, supervised the work on the UST system being inspected, or is employed by or associated with the certified installer whose work is being inspected.

(2) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems for any owner or operator where that certified inspector is employed by the owner or operator or any of the owner's or operator's companies, partnerships, subsidiaries, related companies, or the like.

(a) This prohibition does not prevent a certified inspector from **being employed by the owner or operator to conduct** ~~**conducting**~~ the necessary ~~**inspection**~~ **inspections listed in paragraph (C)(3) of this rule.** ~~**when the only relationship between the certified inspector and the owner or operator is that associated with the inspection itself.**~~

(b) This prohibition does not prevent a certified inspector from being employed by the owner or operator to assess UST systems for compliance with rules 1301:7-9-06 and 1301:7-9-07 of the Administrative Code. The state fire marshal shall retain any and all authority to accept or reject an assessment by a certified inspector.

(3) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems for any owner or operator where the certified inspector is employed by the certified UST installer being inspected or any of the certified UST installer's companies, partnerships, subsidiaries, related companies, or the like.

(4) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems where the certified inspector is the owner or operator of the UST systems being inspected, is a partner in the partnership that is the owner or operator of the UST systems being inspected, or owns a substantial interest in any subsidiary of, related company to, or corporation that is the owner or operator of the UST systems being inspected. For purposes of this rule, "substantial interest" means the ability to directly influence the day-to-day operations of the subsidiary, related company, or corporation, including but not limited to the ability to hire, evaluate and dismiss employees.

(5) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems where the certified inspector is the certified UST installer being inspected, is a partner in the partnership that is the certified UST installer being inspected, or owns a substantial interest in a subsidiary of, related company to, or corporation that is the certified UST installer being inspected. For purposes of this rule, "substantial interest" means the ability to directly influence the day-to-day operations of the subsidiary, related company, or corporation, including but not limited to the ability to hire, evaluate and dismiss employees.

(6) Any individual certified to inspect UST systems pursuant to this rule shall not inspect the installation or replacement of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems where the certified inspector is employed by or associated with a corporation, association, partnership, individual or any other group or person providing any service related to the environmental assessment or testing for the installation of, making major repairs on site to, closure-in-place of, removal of, modification of, change in service of or placing out of service more than ninety days of UST systems, including, without limitation, the collection of any sample or preparation of any reports or other documents required pursuant to rule 1301:7-9-12 of the Administrative Code.

(I) Operational and reporting requirements for certified UST inspectors.

(1) For each visit to a location to conduct a permit inspection, the certified UST inspector shall entirely and accurately complete an inspection report on a form prescribed and provided by the state fire marshal, obtain the signature of the certified installer engaged in the activity inspected, and sign the inspection report prior to leaving the location.

(2) Within thirty days of an inspection, the certified UST inspector shall cause the original of the completed inspection report form required by paragraph (I)(1) of this rule to be delivered to the state fire marshal. Those inspection report forms originating in areas where authority has been delegated to the certified fire safety inspectors of the local fire agency in accordance with paragraph (B)(2) of this rule shall be submitted to the state fire marshal in accordance with paragraph (B)(2)(a) of this rule.

(3) Prior to leaving the permit inspection location, the certified UST inspector shall cause a copy of the completed inspection report form required by paragraph (I)(1) of this rule to be delivered to the owner or the owners' representative of the UST system upon which the inspection was performed.

(4) A certified UST inspector shall inform the state fire marshal of any change in the certified inspector's mailing address within thirty days of the change of address becoming effective. Notice of any change in a mailing address shall be in writing and directed to the state fire marshal.

(5) A certified UST inspector shall conduct all inspections pursuant to and consistent with the inspection report form prescribed by the state fire marshal and in accordance with all applicable requirements of this chapter.

(J) Grounds for denial to issue, refusal to renew, suspension, or revocation of a certificate to inspect UST systems.

(1) Any application for a certification to inspect UST systems shall be denied by the state fire marshal in accordance with Chapter 119. of the Revised Code when any of the following occur:

(a) The applicant failed to demonstrate compliance with any requirement **of** paragraph (D) of this rule; or

(b) The applicant made a misrepresentation or submitted false statements with the initial

application.

(2) An application for renewal of a certification to inspect UST systems shall be denied by the state fire marshal pursuant to Chapter 119 of the Revised Code when any of the following occur:

(a) The applicant failed to demonstrate compliance with paragraph (G) of this rule;

(b) The applicant made a misrepresentation or submitted false statements with the renewal application;

(c) The applicant obtained initial certification to inspect or any renewal of a certification to inspect through fraud or misrepresentation; or

(d) The applicant has been convicted of a felony.

(3) Any certification to inspect and any renewal of a certification to inspect issued pursuant to this rule may be suspended or revoked by the state fire marshal pursuant to Chapter 119~~.~~ of the Revised Code for any of the following reasons:

(a) The certified inspector obtained initial certification to inspect or any renewal thereof through fraud or misrepresentation;

(b) The certified inspector was not present at the location during the performance of any activities described in paragraph (C) of this rule;

(c) The certified inspector failed to demonstrate compliance with any of the operation and reporting requirements in paragraph (I) of this rule;

(d) The certified inspector fails to attend any continuing education training required by the state fire marshal pursuant to paragraph (G)(3) of this rule within the time period prescribed by the state fire marshal;

(e) The certified inspector filed any false document with the state fire marshal related to any inspection conducted pursuant to certification to inspect granted pursuant to this rule;

(f) The certified inspector violated a provision of this chapter;

(g) The certified inspector has been convicted of a felony;

(h) The certified inspector has conducted any inspection prohibited by paragraph (H) of this rule; or

(i) The certified inspector has conducted any inspection **or assessment** pursuant to this rule in a manner that is less than reasonable and prudent using guidelines and procedures established in training required by paragraph (E)(1) of this rule.

1301:7-9-16 **Petroleum contaminated soil.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to divisions (A) and (E) of section 3737.88 and division (B) of section 3737.882 of the Revised Code, the state fire marshal hereby adopts this rule governing the storage, treatment, and disposal of petroleum contaminated soil excavated during corrective actions undertaken in response to releases of petroleum from underground storage tanks. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Definitions.

(1) "Designated facility" means an area of land not open to the public that is owned by, or under a written lease or contract to, the owner and operator of an underground storage tank ~~(UST)~~ system that is used to store or treat petroleum contaminated soil generated from one or more of their UST sites.

(2) "Disposal" means to abandon or discard.

(3) "Excavated soil" means soil removed from the surface or subsurface in conjunction with a suspected release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; in conjunction with a release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; in conjunction with a confirmed release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; or in conjunction with the closure-in-place or permanent removal of an UST system pursuant to rule 1301:7-9-12 of the Administrative Code.

(4) "Hazardous waste" has the same meaning as set forth in Chapter 3745-51 of the Administrative Code.

(5) "Licensed disposal facility" means a facility that has obtained such permits or licenses that this or another state may require to accept materials for permanent burial, destruction, or treatment including petroleum contaminated soil.

(6) "Off-site" means not located on the same parcel of land as the UST system that generated petroleum contaminated soil or any parcel of land contiguous thereto that is owned or under the control of the owner or operator of said UST system.

(7) "On-site" means located on the same parcel of land as the UST system that generated petroleum contaminated soil or any parcel of land contiguous thereto that is owned or under the control of the owner or operator of said UST system. Property separated by a public or private right-of-way or easement shall be considered contiguous.

(8) "Petroleum contaminated soil" or "PCS" means soil that contains ~~chemical(s)~~ chemicals of concern in concentrations that exceed one or more of the re-use action levels in table 1 found in paragraph (D)(1) of this rule and excludes soil defined as hazardous waste.

(9) "Re-use" means to use a material for:

(a) The same purpose for which it was used originally;

(b) A different purpose for which the generator of the material receives compensation upon transfer to another party; or

(c) Another purpose having commercial value to the generator or a recipient of the material.

(10) "Soil" means solid and semi-solid earthen materials or backfill consisting of clay, silt, sand, stones, or gravel and any debris contained therein.

(11) "Storage" means to accumulate, collect, or stockpile excavated soil or petroleum contaminated soil on-site or off-site.

(12) "Treatment" means use of any method, process, or technique other than storage or disposal designed to remove or reduce one or more ~~chemical(s)~~ **chemicals** of concern from petroleum contaminated soil.

(C) Characterization, sampling, and analysis.

(1) Characterization of excavated soil.

~~(a)~~ Upon excavation of soil, the owner or operator shall determine whether the excavated soil is hazardous waste. Excavated soil that is determined to be a hazardous waste shall be managed pursuant to the applicable provisions of Chapters 3745-52 to 3745-69 of the Administrative Code.

(2) Sampling and analysis of excavated soil.

(a) Except as provided in paragraph (C)(2)(b) of this rule, sampling and analysis shall be conducted pursuant to rule 1301:7-9-17 of the Administrative Code.

(b) Excavated soil that is not stored on-site but is shipped directly to a licensed disposal facility following excavation shall be sampled and analyzed prior to shipment to the extent required by the licensed disposal facility receiving the soil. Persons arranging for off-site transport and transporters of excavated soil that qualifies as "hazardous material" shall comply with "Federal Hazardous Material Transportation Rules," 49 C.F.R. Parts 171-179, as published in the October 1, ~~2011~~ **2016**, Code of Federal Regulations. Prior to shipment, additional analyses may be necessary to determine whether excavated soil is "hazardous material".

(D) Re-use of excavated soil.

(1) If excavated soil sampled and analyzed pursuant to the paragraphs (C) of this rule does not exceed re-use action levels in Table 1 of this rule for any ~~chemical(s)~~ **chemical** of concern, then the owner or operator may use the soil for any lawful purpose. This paragraph shall not be interpreted as authorizing use of such soil for purposes prohibited or otherwise restricted by any applicable federal, state, or local laws and regulations.

Table 1 Re-Use Action Levels

CHEMICAL OF CONCERN	ACTION LEVEL
Benzene	~~0.015~~ 0.0246
Toluene	~~4.910~~ 7.07
Ethylbenzene	~~4.550~~ 8.45
Total Xylenes	~~15.700~~ 42.7
Naphthalene	0.051
1,2,4 Trimethyl benzene	0.237
Methyl Tertiary Butyl Ether (MTBE)	~~0.047~~ 0.158
1,2 – Dibromoethane (EDB)	0.000982
1,2 - Dichloroethane (EDC)	0.0101
~~Benzo(a)Anthracene~~ Benzo(a)anthracene	~~2.200~~ 12
Benzo(b)fluoranthene	~~5.530~~ 12
Benzo(k)fluoranthene	~~1.970~~ 120
Benzo(a)pyrene	~~1.100~~ 1.2
Chrysene	~~1.270~~ 1,200
Dibenz(a,h)anthracene	~~0.940~~ 1.2
Indeno(1,2,3-cd)pyrene	~~0.150~~ 12
~~Naphthalene~~	~~3.980~~
TPH (C_6-C_{12})	1000
TPH (C_{10}-C_{20})	2000
TPH (C_{20}-C_{34})	5000

All chemical concentrations expressed in milligrams per kilogram (mg/kg)

(2) If excavated soil sampled in accordance with paragraph (C) of this rule does not exceed the applicable action levels listed in rule 1301:7-9-13 of the Administrative Code, then the excavated soil may be deposited in the original excavation without further treatment. Following placement in the excavation, the soil shall be covered with a minimum of one foot of clean fill.

(3) Following approval from the state fire marshal, excavated soil that exceeds the applicable action levels listed in rule 1301:7-9-13 of the Administrative Code may be deposited in the original excavation for the purpose of remediation pursuant to the corrective action requirements of rule 1301:7-9-13 of the Administrative Code.

(4) When soil samples have been collected, but the analytical results have not been received, the excavated soil may be deposited in the original excavation if the excavation is lined with a synthetic liner having a minimum thickness of ten mil.

(5) If closure samples collected and analyzed pursuant to rule 1301:7-9-12(I) of the Administrative Code are below action levels developed pursuant to rule 1301:7-9-12(I) of the Administrative Code and PCS which was deposited in the original lined excavation pursuant to paragraph (D)(4) of this rule is determined to be above action levels, owners and operators are required to conduct one of the following:

(a) Submit a PCS Treatment Plan pursuant to paragraph (I)(2) of this rule; or

(b) Excavate and properly dispose of the PCS within ninety days of collecting samples for the permanent removal of a UST system or portion of the UST system in accordance with 1301:7-9-12(G) of the Administrative Code.

(6) The state fire marshal may approve the re-use of excavated soil in lieu of or in conjunction with the treatment requirements of this rule on a case-by-case basis where such re-use will provide a benefit to the citizens of Ohio and not cause harm to human health or the environment. The owner or operator may make a request in writing to the state fire marshal describing the proposed re-use. Should the state fire marshal approve the request, the state fire marshal may approve such terms or conditions, including treatment of the excavated soil prior to re-use, that the state fire marshal deems necessary to assure that the proposed re-use will not harm human health or the environment.

(E) On-site storage of excavated soil.

(1) Excavated soil remaining on-site shall be stored as follows:

(a) In portable containers that are free of holes or other damages that may allow a release of material, are secured with lids or covers to prevent infiltration of rainwater, and are individually labeled with the date of excavation and the words: "Non-hazardous soil or backfill. May contain soil contaminated by petroleum products."

(b) In stockpiles protected by a synthetic cover that prevents infiltration from rainwater or run-off of soil and by berms or other devices that diverts run-on of storm water. A twenty-four hour once in ten-year rain event shall be used to design such controls.

(c) During storage, stockpiles shall be placed on an asphalt pad, concrete pad, compatible synthetic liner having a minimum thickness of ten mil, or another material specifically approved by the state fire marshal that prevents the leaching of ~~chemical(s)~~ chemicals of concern. Synthetic liners shall be installed with overlaps of not less than twelve inches and shall be free of rips, tears, or other damage. Excavated soil shall be placed on the liner in a manner that insures liner integrity. A temporary fence, barrier, or other device shall be used to prevent unauthorized entry to storage areas.

(d) All storage techniques shall be constructed and maintained to minimize the release of petroleum vapors and odors.

(2) The owner or operator of the UST site used for storage of PCS shall inspect all storage areas monthly for damage to or unauthorized removal of drums, drum lids, labels, covers, berms, fences, other barriers, or signs used to deter unauthorized entry. A written log of such inspections shall be maintained for a period of five years. The log shall be made available for inspection during normal working hours upon twenty-four hours advance notice by the state fire marshal. Within forty-eight hours of discovery of damage or receipt of notice from the state fire marshal that damage has occurred, the owner or operator shall confirm whether damage has occurred, initiate such repairs as necessary to return the storage area to compliance with this rule, and place in the inspection log a description of the damage found and actions taken.

(3) PCS may be stored on-site in portable containers for a period not to exceed one hundred eighty days from the date the soil was first placed in the containers.

(4) PCS may be stored on-site in a stockpile for a period not to exceed one hundred ~~and~~ twenty days from the date the soil was first placed in the stockpile.

(5) The owner or operator shall maintain a record for five years of the estimated volume of the excavated soil being stored and the date the soil was first placed in containers or a stockpile.

(F) Off-site transportation of excavated soil and related documentation.

(1) Prior to the off-site shipment of excavated soil, the owner or operator shall prepare a transport manifest identifying the origin, amount, and destination of the shipment. The owner or operator of the UST site or agent thereof shall sign the delivery record at the time of shipment. Following delivery, the transporter shall sign the record and return it to the owner or operator, who shall retain the record for a period of five years. The record shall be made available for inspection during normal working hours upon twenty-four hours advance notice by the state fire marshal.

(2) Existing federal, state, and local transportation laws and regulations shall continue to apply to the shipment of PCS. This rule is not intended to displace or revise such laws and regulations.

(G) Temporary off-site storage areas.

(1) PCS from one or more UST ~~site(s)~~ **sites** owned or under the control of the same owner or operator may be transported from the UST site to an off-site storage area and stored for a period not to exceed ninety days from date of excavation. The off-site storage area must be owned or under the control of the owner or operator of the UST ~~site(s)~~ **sites**~~,~~ that generated the PCS.

(2) The owner or operator shall submit, on a form prescribed by the state fire marshal, the details of the origin, transportation and storage of the soil stored off-site within ten days of commencing off-site storage.

(3) PCS delivered to a storage area shall be stored in accordance with the requirements of paragraphs (E)(1), (E)(2), and (E)(5) of this rule.

(4) Prior to further transport of the PCS from the storage area, the owner or operator shall add the date of transport and destination to the delivery record required by paragraph (F)(1) of this rule.

(H) Disposal of petroleum contaminated soil.

(1) Excavated PCS shall not be disposed on-site or off-site without first being treated to reduce ~~chemical(s)~~ **chemicals** of concern in accordance with this rule, unless the soil is disposed of at a licensed disposal facility.

(2) Following disposal of PCS at a licensed disposal facility, owners and operators shall prepare a report that describes the final disposition of the excavated soil on a form prescribed by the **state** fire marshal.

(3) All PCS containing concentrations of ~~chemical(s)~~ **chemicals** of concern shall be managed in a manner that complies with applicable federal, state, and local requirements.

(I) Treatment of petroleum contaminated soil PCS.

(1) Applicability.

(a) A "PCS Treatment Plan" shall be submitted in accordance with **this** paragraph ~~**(I)(2) to (I)(5) of this rule**~~ for approval to the **state** fire marshal, unless one of the following occurs:

(i) The PCS was not returned to the original excavation and is disposed of at a licensed disposal facility;

(ii) The PCS is managed pursuant to rule 1301:7-9-13 of the Administrative Code; or

(iii) The PCS meets the criteria in paragraph (D)(2) of this rule.

(b) PCS must be treated at one of the following locations:

(i) The UST site;

(ii) A designated facility; or

(iii) A licensed disposal facility.

(2) PCS Treatment Plan contents.

Owners or operators shall submit a "PCS Treatment Plan" to the state fire marshal within ninety days of the UST system removal date or the date of generating the PCS stockpile. Treatment target concentrations shall be the re-use action levels from table 1 of this rule unless a variance is granted by the state fire marshal. The PCS Treatment Plan shall include, but is not limited to the following information:

(a) Name of owner or operator;

(b) Name, address, and facility number of the UST site;

(c) Address of the designated facility or licensed disposal facility, if applicable;

(d) Contact person for the PCS Treatment Plan;

(e) The volume, in cubic yards, of soil to be treated;

(f) A description of the PCS treatment process to be implemented;

(g) A conceptual design of the PCS treatment system (detailed engineering drawings are not necessary);

(h) A brief description of the treatment alternatives considered, including a discussion of the reliability, effectiveness, cost, and time needed for completion, and the rationale for the selected program;

(i) A monitoring plan that describes the monitoring to be used to determine whether treatment target concentrations are being achieved;

(j) A description of the reporting frequency and proposed content of reports;

(k) A description of any permits (e.g., air emission, water discharge) or other governmental approvals required for implementation of the plan;

(l) An implementation schedule and the projected completion date of the proposed PCS treatment activities; and

(m) Site maps or drawings that accurately depict the location of the designated facility, the property boundaries, street locations, above ground structures, underground structures and utilities, soil stockpiles, PCS treatment areas, and other pertinent features.

(3) Public participation.

(a) For each PCS Treatment Plan submitted to the state fire marshal, the owner ~~and/or~~ **or** operator shall provide notice to the public.

(b) Public notice shall be by means designated to reach those members of the public directly affected by the release and the planned treatment activities. 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 personal contacts by field staff.

(c) The state fire marshal shall ensure the UST site release information and decisions concerning the PCS Treatment Plan are made available to the public for inspection upon request.

(d) Before approving a PCS Treatment Plan the state fire marshal may hold a public meeting to consider comments on the proposed PCS Treatment Plan if there is sufficient public interest or for any other reason.

(4) Implementation of PCS Treatment Plan.

(a) Upon approval of the PCS Treatment Plan, owners or operators shall implement the plan. Owners or operators shall monitor, evaluate, and report to the state fire marshal the results of implementation efforts in accordance with the reporting requirements contained in the plan.

(b) If the treatment technology approved by the state fire marshal in the plan has been installed and operated for a minimum of one year and the technology is unable to reduce the concentrations of ~~chemical(s)~~ **chemicals** of concern to a level at or below applicable action levels, then the owner and operator must:

(i) Re-evaluate the assumptions and parameters used in the PCS Treatment Plan;

(ii) Re-evaluate the treatment alternatives; and

(iii) Submit a revised PCS Treatment Plan.

(c) If treatment is able to reduce concentrations of ~~chemical(s)~~ **chemicals** of concern to a level at or below applicable action levels, ~~than~~ **then** no further treatment is required.

(5) Reporting.

Following completion of PCS treatment in accordance with the approved plan, owners or operators shall prepare a PCS Treatment Completion Report that demonstrates that the treatment objectives have been met. The report shall contain documentation supporting termination of treatment activities in accordance with paragraph (I)(2) of this rule, including a description of the final disposition of the excavated soil, on a form prescribed by the state fire marshal.

(J) Releases from PCS treatment and storage facilities.

(1) When directed by the state fire marshal, owners and operators shall assess the soil and ~~ground water~~ **groundwater** under any designated facility or UST site if the treatment or storage of PCS may, in the judgment of the state fire marshal, pose a current or potential threat to human health or the environment.

(2) Upon the discovery of a petroleum impact suspected to be the result of the treatment or storage of PCS, the owner and operator shall conduct the following:

(a) Cease all additional applications of PCS until otherwise instructed by the state fire marshal;

(b) Notify the state fire marshal within twenty-four hours of the discovery of the soil or groundwater contamination; and

(c) Perform immediate corrective action in accordance with the requirements of rule 1301:7-9-13 of the Administrative Code and continue with the corrective action process, as necessary, to contain and clean up the release.

(K) Variances.

(1) Owners and operators may submit a variance request to the state fire marshal to deviate from any method or requirement specified in this rule by demonstrating that the proposed variance is at least as effective as those required by this rule. Written approval must be obtained from the state fire marshal prior to implementation. If the variance is approved by the state fire marshal, the owners and operators shall comply with any conditions imposed by the state fire marshal. The state fire marshal may grant, modify, or deny any extension request at his sole discretion.

(2) The state fire marshal may approve the variance for use at a specific UST site or for use at all UST sites. If the state fire marshal approves a variance for use at all UST sites, the owners and operators shall comply with any conditions imposed by the state fire marshal on the use of the variance.

1301:7-9-17 **Sampling and analysis of excavated soil for the purpose of treatment and disposal.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to divisions (A) and (E) of section 3737.88 and division (B) of section 3737.882 of the Revised Code, the state fire marshal hereby adopts this rule governing the sampling and analysis of excavated soil arising from underground storage tank ~~(UST)~~ systems containing petroleum. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code."

(B) Definitions.

(1) "Excavated soil" means soil removed from the surface or subsurface in conjunction with a suspected release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; in conjunction with a release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; in conjunction with a confirmed release as that term is defined in paragraph (C) of rule 1301:7-9-13 of the Administrative Code; or in conjunction with the closure-in-place or permanent removal of an UST system pursuant to rule 1301:7-9-12 of the Administrative Code.

(2) "Petroleum contaminated soil" or "PCS" means soil that contains ~~chemical(s)~~ chemicals of concern in concentrations that exceed one or more of the re-use action levels in table 1 of rule 1301:7-9-16 of the Administrative Code and excludes soil defined as hazardous waste.

(3) "Soil" means solid and semi-solid earthen materials or backfill consisting of clay, silt, sand, stones, or gravel and any debris contained therein.

(4) "Licensed disposal facility" means a facility that has obtained such permits or licenses that this or another state may require to accept materials for permanent burial, destruction, or treatment, including petroleum contaminated soil.

(C) General requirements.

(1) Excavated soil shall be segregated based upon apparent degree of contamination.

(2) Each soil pile or container of soil shall be sampled in accordance with this rule. The soil sample containing the highest analytical result shall characterize the entire soil pile or container for disposal, treatment, or re-use.

(3) All excavated soil shall be managed as PCS unless laboratory analysis indicates otherwise.

(4) The volume of excavated soil, for each soil pile or container, shall be calculated to determine the number of soil samples that shall be collected to comply with this rule. In-situ soil volume shall be converted to excavated soil volume by multiplying the in-situ volume by an expansion factor of 1.25. This paragraph shall not apply to excavated soil stored in containers.

(5) Analytical results obtained pursuant to paragraph (I) of rule 1301:7-9-12 of the Administrative

Code shall not be used to characterize excavated soil generated during a permanent removal, change-in-service, or closure-in-place of an UST pursuant to rule 1301:7-9-12 of the Administrative Code.

(6) All soil samples collected for the purposes of this rule shall be discrete grab samples. Composite soil samples shall not be used for the purposes of complying with this rule. All excavated soil shall be sampled within forty-eight hours of the completion of the excavation.

(7) Grab samples shall be split into two components. One component shall be packaged for field screening, **and** the other packaged for potential laboratory analysis. The sampling and packaging shall be in accordance with procedures established by the state fire marshal.

(8) If field screening is not conducted on the grab samples, all of the grab samples collected shall be submitted for laboratory analysis.

(9) All soil samples must be analyzed by an accredited laboratory.

(D) Combining piles.

Excavated soil may be combined provided they are segregated in accordance with this rule. When combining soil, one or more of the following shall be conducted:

(1) Excavated soil generated from various areas of an UST site may be combined at the discretion of the owner or operator;

(2) Excavated soil from different facilities may be combined for purposes of characterizing the soil pile. However, if one or more of the ~~chemical(s)~~ **chemicals** of concern exceed re-use action levels, referenced in table 1 of rule 1301:7-9-16 of the Administrative Code, the soil must be disposed of at a licensed disposal facility; or

(3) If all the combined excavated soil has not been previously characterized prior to being combined, ~~they~~ **it** shall be characterized in accordance with this rule.

(E) Sampling soil in drums and small containers.

(1) Analytical results obtained from soil borings sampled pursuant to rule 1301:7-9-12 or 1301:7-9-13 of the Administrative Code may be used to characterize soil from such borings for purposes of this rule.

(2) For excavated soil in containers having a capacity of fifty-five gallons (0.27 cubic yards) or less, one grab sample shall be collected from the center at mid-depth of the soil in the container. Each sample collected shall be submitted for laboratory analysis.

(F) Sampling soil in piles and large containers.

Excavated soil that has not been previously characterized pursuant to paragraph (E) of this rule shall be characterized as follows:

(1) At a minimum, the number of soil samples required to be collected for field screening shall be

the number set forth in table 1 of this rule;

Table 1 - Cubic yards of soil generated

	<25	25-100	101-250	251-450	>450
1. Minimum number of grab samples to collect and field screen	3	6	12	18	18 plus 1 sample per each additional 50 cubic yards (or fraction thereof)
2. Minimum number of grab samples to submit to the laboratory if field screened	2	3	6	8	8 plus 1 sample per each additional 100 cubic yards (or fraction thereof)

(2) Soil sample locations shall be determined by visually dividing the soil pile or the container into a sampling grid with sections of approximately equal surface area. The number of sample grids shall equal the minimum number of grab samples to be collected. The minimum number of grab samples to be collected is specified in table 1 of this rule; and

(3) A grab sample shall be collected from the center of each grid section at least twelve inches below the soil surface.

(4) The minimum number of grab sample components to be submitted for laboratory analysis is specified in table 1 of this rule. All soil samples collected shall be split into two components; one packaged for field screening, the other packaged for potential laboratory analysis. The sampling and packaging shall be in accordance with procedures established by the state fire marshal. The samples with the highest field screening readings shall be submitted for laboratory analysis.

(G) Sample analysis.

Grab samples submitted for laboratory analysis shall be analyzed pursuant to paragraph (H)(1)(c) of rule 1301:7-9-13 of the Administrative Code.

1301:7-9-18 **Delivery prohibition for USTs.**

(A) Purpose and scope.

For the purpose of prescribing rules pursuant to section 3737.88 of the Revised Code, the state fire marshal hereby adopts this rule to establish delivery prohibition for underground storage tanks ~~(UST)~~ containing petroleum or other regulated substances. This rule is adopted by the state fire marshal in accordance with Chapter 119 of the Revised Code and shall not be considered a part of the "Ohio Fire Code." ~~The following USTs are exempt from this rule:~~

~~(1) Wastewater treatment tank systems;~~

~~(2) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C.A. 2014 and following);~~

~~(3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the United States nuclear regulatory commission;~~

~~(4) Airport hydrant fuel distribution systems; and~~

~~(5) UST systems with field constructed tanks.~~

(B) Delivery prohibition.

After the effective date of this rule, it shall be unlawful for any person to deliver, deposit, or accept a regulated substance into an UST that has a red tag attached to the fill pipe of the UST that the state fire marshal has classified as ineligible for delivery, deposit, or acceptance of a regulated substance in accordance with paragraphs (D)(1) ~~through~~ to (D)(4) of this rule.

(C) Identifying an ineligible UST.

(1) The state fire marshal shall classify an UST as ineligible for delivery, deposit, or acceptance of a regulated substance as soon as practicable after the state fire marshal determines one or more of the following conditions exist:

(a) Required spill prevention equipment is not installed pursuant to rule 1301:7-9-06 of the Ohio Administrative Code;

(b) Required overfill prevention equipment is not installed pursuant to rule 1301:7-9-06 of the Ohio Administrative Code;

(c) Required corrosion protection equipment is not installed pursuant to rule 1301:7-9-06 of the Ohio Administrative Code; or

(d) Required release detection equipment is not installed pursuant to rule 1301:7-9-07 of the Ohio Administrative Code.

(2) The state fire marshal may classify an UST as ineligible for delivery, deposit, or acceptance of a regulated substance if the owner and operator of the UST has been issued a written

Notice of UST Violation for any of the following violations, and the owner or operator fails to correct the violation within sixty ~~(60)~~ days of the issuance of the Notice of UST Violation:

(a) Failure to properly operate or maintain spill prevention equipment pursuant to rule 1301:7-9-06 of the Ohio Administrative Code;

(b) Failure to properly operate or maintain overfill prevention equipment pursuant to rule 1301:7-9-06 of the Ohio Administrative Code;

(c) Failure to properly operate or maintain corrosion protection equipment pursuant to rule 1301:7-9-06 of the Ohio Administrative Code;

(d) Failure to properly operate or maintain release detection equipment pursuant to rule 1301:7-9-07 of the Ohio Administrative Code; or

(e) Failure to obtain a valid certificate of coverage from the Petroleum Underground Storage Tank Release Compensation Board pursuant to ~~O.A.C.~~ **paragraph (G)(1) of rule** 1301:7-9-05~~(G)(1)~~ **of the Administrative Code**.

(D) Notification and red tag procedures.

(1) If the state fire marshal classifies an UST as ineligible for delivery, deposit, or acceptance of a regulated substance pursuant to paragraph (C) of this rule, the state fire marshal shall issue an order to the owner and operator prior to prohibiting the delivery, deposit, or acceptance of a regulated substance.

(a) The order shall be issued to the owner and operator as identified on the registration form submitted to the state fire marshal in accordance with rule 1301:7-9-04 of the Administrative Code and any other persons known by the state fire marshal to be an owner or operator.

(b) The order is deemed properly served by the state fire marshal in any of the following ways:

(i) The order is personally delivered;

(ii) The order is sent via certified mail to the address set forth on the UST registration form submitted to the state fire marshal in accordance with rule 1301:7-9-04 of the Administrative Code and the signed return receipt card is received by the state fire marshal; or

(iii) In those instances when the order, sent via certified mail, is returned due to failure of delivery, the order is sent via regular mail to the address set forth on the UST registration form submitted to the state fire marshal in accordance with rule 1301:7-9-04 of the Administrative Code.

(c) The state fire marshal will provide a written notice to any additional persons listed on the registration form submitted to the state fire marshal in accordance with rule 1301:7-9-04 of the Administrative Code.

(2) The written order described in paragraph (D)(1) of this rule shall include:

(a) The specific reasons or violations that led to the ineligible classification;

(b) A statement notifying the owner and operator that it is unlawful for any person to deliver, deposit, or accept a regulated substance into the UST once a red tag has been attached to the fill pipe of the UST that the state fire marshal determined to be ineligible for delivery, deposit, or acceptance of a regulated ~~**susbtance**~~ **substance** in accordance with paragraphs (D)(1) through (D)(4) of this rule;

(c) The name and address of the state fire marshal representative to whom a written request for re-inspection can be made, if a re-inspection is necessary; and

(d) A statement addressing the right to appeal the state fire marshal's order pursuant to paragraph (D) of section 3737.882 of the Revised Code.

(3) Once service of the order is complete pursuant to paragraph (D)(1) of this rule, the state fire marshal shall publish on the state fire marshal's website those USTs that are classified as ineligible for delivery, deposit, or acceptance of a regulated substance. The ineligible USTs shall be posted on the state fire marshal's website a minimum of seven days prior to the red tag being affixed to the UST.

(4) Once publication is complete pursuant to paragraph (D)(3) of this rule, the state fire marshal shall attach a red tag to the fill pipe of the UST that the state fire marshal determined to be ineligible for delivery, deposit, or acceptance of a regulated substance in accordance with the following:

(a) A separate red tag shall be attached to each fill pipe of each UST determined to be ineligible for delivery, deposit, or acceptance of a regulated substance;

(b) The red tag shall include the following wording in at least 16 point type: "Delivery Prohibited. Delivering petroleum or other regulated substance to this underground storage tank, or removing, defacing, altering, or otherwise tampering with this tag may result in civil penalties of up to $10,000 per day";

(c) The state fire marshal shall attempt to document the level and/or volume of regulated substance in the UST at the time that red tag is attached;

(d) The state fire marshal shall maintain a list of all underground storage tanks that are classified as ineligible for delivery, deposit, or acceptance of a regulated substance. The state fire marshal shall make updates to the list available to the public by posting the list on the state fire marshal's website in a timely manner;

(e) If an eligible UST is connected or manifolded to an ineligible UST, the state fire marshal will determine that both USTs are ineligible to receive delivery, deposit, or acceptance of a regulated substance for purposes of this rule, unless the eligible UST tank meets both of the following requirements:

(i) The eligible UST is designed to receive a regulated substance through a means not connected, manifolded, or otherwise dependent on the ineligible UST; and

(ii) The eligible UST is prevented from delivering or receiving regulated substances to or from the ineligible UST;

(f) For a multiple compartment UST; the red tag shall only be attached to the fill pipe of the compartment associated with the condition or violation which resulted in the compartment being determined ineligible for the delivery, deposit, or acceptance of a regulated substance.

(5) Owners or operators may continue to operate an UST that is classified as ineligible pursuant to this rule until the ineligible UST is empty. The UST shall not receive delivery, deposit, or acceptance of a regulated substance during this time.

(6) The classification of an UST as ineligible shall remain in effect until the conditions cited in the order no longer exist as determined by the state fire marshal and the red tag is removed by the state fire marshal or an authorized designee. If the state fire marshal determines that an ineligible UST has returned to compliance and is now eligible for delivery, deposit, or acceptance of a regulated substance, the state fire marshal or an authorized designee shall do all of the following:

(a) Remove the red tag from the UST fill pipe no later than five business days after the state fire marshal determines that the UST is compliant;

(b) Remove the UST from the ineligible list posted on the state fire marshal's website; and

(c) Provide a written notice to the owner and operator that the ineligible UST has returned to compliance and is now eligible for delivery, deposit, or acceptance of a regulated substance.

(E) Product delivery.

Any person delivering or depositing regulated substances into an UST that has been classified as ineligible by the state fire marshal and has a red tag affixed to the fill pipe shall be in violation of paragraph (B) of this rule.

(F) Additional conditions.

(1) It shall be unlawful for any person to tamper with and/or remove the red tag without the state fire marshal's approval.

(2) The state fire marshal may delay the classification of an UST as ineligible for delivery, deposit or acceptance of regulated substances if the state fire marshal determines that prohibiting delivery to the UST would jeopardize health and safety or the availability of fuel to the community.

(3) The state fire marshal may allow the delivery, deposit or acceptance of a regulated substance into an UST determined to be ineligible for purposes of testing and other activities required to comply with an order pursuant to paragraph (D)(1) of this rule.

(4) Nothing in this rule shall affect or preempt the authority of the state fire marshal or any other authority with jurisdiction to prohibit the delivery, deposit, or acceptance of a regulated substance to an UST under other existing regulations.