ILLINOIS POLLUTION CONTROL BOARD
April 27, 1989

IN THE MATTER OF:	)	
	)	
UST UPDATE, USEPA REGULATIONS (SEPTEMBER 23, 1988)	)	R88-27

FINAL ORDER. ADOPTED RULES

ORDER OF THE BOARD (by J. Anderson):

Pursuant to Section 22.4(e) of the Environmental Protection Act (Act), the Board is amending the UST underground storage tank regulations.

Section 22.4 of the Act governs adoption of regulations establishing the RCRA program in Illinois. Section 22.4(e) provides for quick adoption of regulations which are "identical in substance" to federal regulations. Section 22.4(e) provides that Title VII of the Act and Section 5 of the Administrative Procedure Act (APA) shall not apply. Because this rulemaking is not subject to Section 5 of the APA, it is not subject to first notice or to second notice review by the Joint Committee on Administrative Rules (JCAR). The federal UST rules are found at 40 CFR 280. This rulemaking updates Illinois' UST rules to correspond with major federal amendments which appeared at 53 Fed. Reg. 37082, September 23, 1988.

The Board proposed to adopt these rules on February 2, 1989. The proposal appeared on March 3, 1989, at 13 Ill. Reg. 2650. The Board has modified the proposal in response to public comment as is detailed in the Opinion. The Board now directs that the rules be filed with the Secretary of State. The Board will withhold filing until May 26, 1989, to allow time for motions for reconsideration by the agencies involved in the authorization process.

This Order is supported by an Opinion adopted this same day. The complete text of the proposed rules follows.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER d: UNDERGROUND INJECTION CONTROL
AND UNDERGROUND STORAGE TANK PROGRAMS

PART 731
UNDERGROUND STORAGE TANKS

SUBPART A: PROGRAM SCOPE AND INTERIM PROHIBITION

SUBPART B: UST SYSTEMS: DESIGN, CONSTRUCTION, INSTALLATION AND NOTIFICATION

SUBPART C: GENERAL OPERATING REQUIREMENTS

SUBPART D: RELEASE DETECTION

SUBPART E: RELEASE REPORTING, INVESTIGATION AND CONFIRMATION

SUBPART F: RELEASE RESPONSE AND CORRECTIVE ACTION

SUBPART G: OUT-OF-SERVICE SYSTEMS AND CLOSURE

AUTHORITY: Implementing Section 22.4(e) and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1987, ch. 111 1/2, pars. 1022.4(e) and 1027).

SOURCE: Adopted in R86-1 at 10 Ill. Reg. 14175, effective August 12, 1986; amended in R86-28 at 11 Ill. Reg. 6220, effective March 24, 1987; amended in R88-27 at 13 Ill. Reg. , effective .

SUBPART A: PROGRAM SCOPE AND INTERIM PROHIBITION

Section 731.101 Definitions and exemptions (Repealed)

~~a) "Operator" means any person in control of, or having responsibility for, the daily operation of an underground storage tank.~~

~~b) "Owner" means:~~

~~1) In the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for storage, use or dispensing of regulated substances; and~~

~~2) In the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before discontinuation of its use.~~

~~c) "Person" has the same meaning as provided in Section 1004(15) of the Resource Conservation and Recovery Act, as amended, (42 U.S.C. 6901 et seq.) except that such term includes a consortium, a joint venture, a commercial entity, and the United States Government.~~

~~d) "Regulated substance" means~~

~~1) Any substance as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980~~

~~(42 U.S.C. 9601 et seq.) (but not including any substance regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act, as amended), and~~

~~2) Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).~~

~~e) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an underground storage tank into groundwater, surface water or subsurface soils.~~

~~f) "Underground storage tank" means any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is ten per centum or more beneath the surface of the ground. Such term does not include any:~~

~~1) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes,~~

~~2) Tank used for storing heating oil for consumptive use on the premises where stored,~~

~~3) Septic tank,~~

~~4) Pipeline facility (including gathering lines),~~

~~5) Regulated under the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. 1671 et. seq.) or~~

~~6) Regulated under the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. 2001 et seq.) or~~

~~7) Regulated under the Illinois Gas Pipeline Safety Act, Ill. Rev. Stat. 1985, ch. 111 2/3, pars. 551 et seq.,~~

~~8) Surface impoundment, pit pond or lagoon,~~

~~9) Storm water or wastewater collection system,~~

~~10) Flow-through process tank,~~

~~11) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations, or~~

~~12) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft or tunnel) if the storage tank is situated upon or above the surface of the undesignated floor,~~

~~13) Any pipes connected to any tank which is described in subsection (d)(1) through (d)(12).-~~

(Source: Repealed at 13 Ill. Reg. , effective)

Section 731.102 Interim prohibitions (Repealed)

a) Between May 7, 1985 and the effective date of the standards promulgated by the Administrator of the United States Environmental Protection Agency under Section 9003(e) of the Hazardous and Solid Waste Amendments of 1984 (42 U.S.C. 6991 et seq.) no person may install an underground storage tank for the purpose of storing regulated substances unless such tank (whether of single or double wall construction):

1) Will prevent releases due to corrosion or structural failure for the operational life of the tank;

2) Is cathodically protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material or designed in a manner to prevent the release or threatened release of any stored substance; and

3) The material used in the construction or lining of the tank is compatible with the substance to be stored.

b) Notwithstanding subsection (a), if soil tests conducted in accordance with ASTM Standard G57-78, incorporated by reference in Section 731.900, show that soil resistivity in an installation location is 12,000 ohm-cm or more, a storage tank without corrosion protection may be installed in that location during the period referred to in subsection (a).-

(Source: Repealed at 13 Ill. Reg. , effective)

Section 731.103 Notification Requirements (Repealed)

a) Each owner of an underground storage tank currently in use shall submit, in the form prescribed in Appendix A, a notice of the existence of such tank to:

Underground Storage Tank Coordinator
Division of Fire Prevention
Office of State Fire Marshal
3150 Executive Park Drive
Springfield, IL 62703-4599

b) Each owner of an underground storage tank taken out of operation after January 1, 1974, (unless the owner knows that such tank has been removed from the ground) shall submit, in the form prescribed in Appendix A, a notice of the existence of such tank to the address specified in subsection (a).

c) Any owner who brings an underground storage tank into use shall, within 30 days after bringing such tank into use, submit, in the form prescribed in Appendix A, a notice of the existence of such tank to

~~the address specified in subsection (a).~~

~~e) Owners required to submit notices under subsections (a) through (c) shall provide notices to the agency specified in subsection (a) for each tank they own. Owners may provide notice for several tanks on one form, but owners who own tanks located at more than one place of operation shall file a separate notification form for each separate place of operation.~~

~~f) Notices submitted under subsections (a) through (e) must provide all of the information indicated on the form in Appendix A for each tank for which notice must be given.~~

~~g) Through June 8, 1987, any person who deposits regulated substances in an underground storage tank shall make reasonable efforts to notify the owner or operator of such tank of the owner's obligations under subsections (a) through (e).~~

~~h) Beginning 30 days after the United States Environmental Protection Agency issues new tank performance standards pursuant to Section 9003(c) of the Resource Conservation and Recovery Act, any person who sells a tank intended to be used as an underground storage tank shall notify the purchaser of such tank of the owner's notification obligations under subsections (a) through (e).~~

~~i) Subsections (a) through (e) do not apply to tanks for which notice was given pursuant to Section 103(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980.~~

(Source: Repealed at 13 Ill. Reg. , effective)

Section 731.110 Applicability

a) This Part applies to owners and operators of an Underground Storage Tank (UST) system as defined in Section 731.112 except as otherwise provided in subsections (b), (c) or (d). Any UST system listed in subsection (c) must meet the requirements of Section 731.111.

b) The following UST systems are excluded from the requirements of this Part:

1) Any UST system holding hazardous waste or a mixture of such hazardous waste and other regulated substances.

2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 12(f) of the Environmental Protection Act (Ill. Rev. Stat. 1987, ch. 111 1/2, par. 1012(f)).

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 110 gallons or less.

5) Any UST system that contains a de minimus concentration of regulated substances.

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

c) Deferrals. Subparts B, C, D, E and G do not apply to any of the following types of UST systems:

1) Wastewater treatment tank systems;

2) Any UST systems containing radioactive materials that are regulated by the Nuclear Regulatory Commission under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.);

3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50, Appendix A, incorporated by reference in Section 731.113;

4) Airport hydrant fuel distribution systems; and

5) UST systems with field-constructed tanks.

d) Deferrals. Subpart D does not apply to any UST system that stores fuel solely for use by emergency power generators.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.111 Interim Prohibition for Deferred Systems

a) No person shall install an UST system listed in Section 731.110(c) for the purpose of storing regulated substances unless the UST system (whether of single or double-wall construction):

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

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

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

b) Notwithstanding subsection (a), an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators shall maintain records that demonstrate compliance with the requirements of this subsection for the remaining life of the tank.

BOARD NOTE: NACE RP0285, incorporated by reference in Section 731.113, may be used as guidance for compliance with this subsection.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.112 Definitions

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

"Act" means the Environmental Protection Act (Ill. Rev. Stat. 1987, ch. 111 1/2, par. 1001 et seq.).

"Agency" means the Illinois Environmental Protection Agency.

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

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

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

"Board" means the Illinois Pollution Control Board.

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

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

"CERCLA" means the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. 9601 et seq.)

"Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with

one another for the design life of the tank system under conditions likely to be encountered in the UST.

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

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

"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.

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

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

"ESDA" means the Illinois Emergency Services and Disaster Agency.

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

"Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:

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

And, if either:

A continuous on-site physical construction or installation program has begun; or,

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

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

"Fire Marshal" means the Office of the State Fire Marshal.

"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.

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

"Gasoline Act" means "An Act To Regulate The Storage, Transportation, Sale And Use Of Gasoline And Volatile Oils", as amended (Ill. Rev. Stat. 1987, ch. 127 1/2, par. 151 et seq.)

"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.

"Hazardous substance" means any substance listed in 40 CFR 302.4, incorporated by reference in Section 731.113 (but not including any substance regulated as a hazardous waste under 35 Ill. Adm. Code 721).

BOARD NOTE: This definition is derived from the definition of "hazardous substance UST system" in 40 CFR 280.12, as adopted at 53 Fed. Reg. 37194, September 23, 1988, and "hazardous substance" in Section 101(14) of CERCLA. The United States Environmental Protection Agency (USEPA) regulations which implement the statutes cited in CERCLA have been inserted in place of the authorizing statutes.

"Hazardous substance UST system" means an underground storage tank system that contains a "hazardous substance", or any mixture of "hazardous substances" and "petroleum" which is not a "petroleum UST system".

BOARD NOTE: This definition is derived from the corresponding definition in 40 CFR 280.12, as adopted at 53 Fed. Reg. 37194,

September 23, 1988, inserting terms defined elsewhere in this Section.

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

"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, elevator and other similar devices.

"Implementing agency". See Section 731.114.

"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 liquid. These liquid traps may temporarily collect liquids for subsequent disposition for reinjection into a production or pipeline stream, or may collect and separate liquids from gas stream.

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

"Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel or any grade of gasohol, and is typically used in the operation of a motor engine.

"New tank system" means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also "Existing Tank System.")

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

"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.

"Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Subpart G.

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

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

"Owner" means:

In the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use or dispensing of regulated substances; and

In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

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

"Petroleum" means crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "petroleum" includes, but is not limited to, petroleum and petroleum-based substances comprising a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils.

BOARD NOTE: This definition is derived from the definitions of "petroleum UST system" and "regulated substance" in 40 CFR 280.12, as adopted at 53 Fed. Reg. 37194, September 23, 1988.

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

BOARD NOTE: This definition is derived from the corresponding definition in 40 CFR 280.12, as adopted at 53 Fed. Reg. 37194, September 23, 1988, inserting terms defined elsewhere in this Section.

"Pipe" or "Piping" means a hollow cylinder or tabular conduit that is constructed of non-earthern materials.

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

"Regulated substance" means any "hazardous substance" or "petroleum".

BOARD NOTE: This definition is derived from the corresponding definition in 40 CFR 280.12, as adopted at 53 Fed. Reg. 37194, September 23, 1988, inserting terms defined elsewhere in this Section.

"Release" means any spilling, leaking, emitting, discharging,

escaping, leaching or disposing from an UST into groundwater, surface water or subsurface soils.

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

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

"Residential tank" is a tank located on property used primarily for dwelling purposes.

"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 soilds and scum from the tank are pumped out periodically and hauled to a treatment facility.

"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.

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

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

"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.

"Underground release" means any below-ground release.

"Underground storage tank" or "UST" means any one or combination of tanks (including underground pipes connected thereto) which is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is ten per centum or more beneath the surface of the ground. Such term does not include any:

Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes.

Tank used for storing heating oil for consumptive use on the premises where stored.

Septic tank.

Pipeline facility (including gathering lines) regulated under:

The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C.A. 1671 et seq. (1987 and 1987 Supp.)), or

The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C.A. 2001 et seq. (1987)), or

The Illinois Gas Pipeline Safety Act (Ill. Rev. Stat. 1987, ch. 111 2/3, pars. 551 et seq.).

Surface impoundment, pit, pond or lagoon.

Storm-water or wastewater collection system.

Flow-through process tank.

Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations. Or,

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

The term "underground storage tank" does not include any pipes connected to any tank which is described in the above subparagraphs.

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

"USEPA" means United States Environmental Protection Agency.

"UST system" or "Tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

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

(Source: Added at 13 Ill. Reg. , effective)

Section 731.113 Incorporations by Reference

a) The following publications are incorporated by reference:

ACT. Available from the Association for Composite Tanks, 108 N. State St., Suite 720, Chicago, IL 60602, (800) 368-2105:

ACT-100/88, "Specification for the Fabrication of FRP Clad/Composite Underground Storage Tanks", revised March 16, 1988

ANSI. Available from the American National Standards Institute, 1430 Broadway, New York, New York 10018, (212) 354-3300:

See ASME.

API. Available from the American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005, (202) 682-8000:

API Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks", Second Edition, December, 1987

API Recommended Practice 1615, "Installation of Underground Petroleum Storage Systems", Fourth Edition, November, 1987

API Recommended Practice 1621, "Bulk Liquid Stock Control at Retail Outlets", Fourth Edition, December, 1987

API Recommended Practice 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations", First Edition, April, 1985

API Recommended Practice 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations", First Edition, August, 1986

API Recommended Practice 1631, "Interior Lining of Underground Storage Tanks", Second Edition, December, 1987

API Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems", Second Edition, December, 1987

API Publication 2015, "Cleaning Petroleum Storage Tanks", Third Edition, September, 1985

API Publication 2200, "Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines", Scond Edition, April, 1983

ASME. Available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017, (212) 705-7722:

"Chemical Plant and Petroleum Refinery Piping", ASME/ANSI B31.3 - 1987, as supplemented by B31.3a - 1988 and B31.3b -

1988. Also available from ANSI.

"Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols", ASME/ANSI B31.4 - 1986, as supplemented by B31.4a - 1987. Also available from ANSI.

ASTM. Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103, (215) 299-5400:

ASTM D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks", approved July 25, 1986.

NACE. Available from the National Association of Corrosion Engineers, 1400 South Creek Dr., Houston, TX 77084, (713) 492-0535:

NACE Standard Recommended Practice RP0169-83, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems", Revised January, 1983

NACE Standard Recommended Practice RP0285-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems", Approved March, 1985

NFPA. Available from the National Fire Protection Association, Batterymarch Park, Boston, MA 02269, (617) 770-3000 or (800) 344-3555:

NFPA 30, "Flammable and Combustible Liquids Code", issued July 17, 1987. Also available from ANSI.

NFPA 385, "Tank Vehicles for Flammable and Combustible Liquids", issued December 7, 1984. Also available from ANSI.

NIOSH. Available from the National Institute for Occupational Safety and Health, Publications Office, 4676 Columbia Parkway, Cincinnati, OH 45226 (513) 533-8287:

NIOSH Publication No. 80-106, "Criteria for a Recommended Standard ...Working in a Confined Spaces", December, 1979

PEI. Petroleum Equipment Institute, Box 2380, Tulsa, OK 74101 918/ 743-9941.

PEI/RP100-87, "Recommended Practices for Installation of Underground Liquid Storage Systems" , 1987 Edition

STI. Available from the Steel Tank Institute, 728 Anthony Trail, Northbrook, IL 60062, (312) 498-1980:

STI-P3, "Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks", effective May 1, 1987.

STI, "Standard for Dual Wall Underground Steel Storage Tanks" (1986).

UL. Underwriters Laboratories, Inc., Publications Stock, 333 Pfingsten Road, Northbrook, IL 60062-2096 312/ 272-8800, extension 2612 or 2622:

UL 58 -- 1985, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids", Eighth Edition, April 15, 1986. Also available from ANSI.

UL 567 -- 1983, "Standard for Pipe Connectors for Flammable and Combustible Liquids and LP-Gas", Fifth Edition, March 12, 1984, as revised September 30, 1985. Also available from ANSI.

UL 1316, "Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products", First Edition, July 1, 1983, as revised April 29, 1986 and March 3, 1987

UL Canada. Underwriters' Laboratories of Canada, 7 Crouse Rd., Scarborough, Ontario M1R 3A9 CANADA, 416/ 757-3611.

UL Canada Standard CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids", First Edition, June, 1985.

UL Canada Standard CAN4-S603.1-M85, "Standard for Galvanic Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids", First Edition, June, 1985.

UL Canada Standard CAN4-S615-M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products", First Edition, February, 1983.

UL Canada Standard CAN4-S631-M84, "Standard for Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems", First Edition, May, 1984.

UL Canada Standard CAN4-S633-M84, "Flexible Underground Hose Connectors for Flammable and Combustible Liquids", First Edition, June, 1984.

UL Canada Subject C107C-M1984, "Guide for Glass Fibre Reinforced Plastic Pipe and Fittings for Flammable Liquids", First Edition, June, 1984.

b) CFR (Code of Federal Regulations). Available from the Superintendent

of Documents, U.S. Government Printing Office, Washington, D.C. 20401, (202) 783-3238:

10 CFR 50, Appendix A (1988)

40 CFR 280.3 (1987) (repealed September 23, 1988)

40 CFR 302.4, 302.5 and 302.6 (1988)

40 CFR 355.40 (1988)

c) This Section incorporates no later editions or amendments.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.114 Implementing Agency

a) The implementing agency is the Fire Marshal or the Agency, as specified in this Part.

b) Generally the Agency is the implementing agency for corrective action beyond immediate response. The Fire Marshal is the implementing agency for all other aspects of the program.

(Source: Added at 13 Ill. Reg. , effective)

SUBPART B: UST SYSTEMS: DESIGN; CONSTRUCTION, INSTALLATION AND NOTIFICATION

Section 731.120 Performance Standards for New Systems

In order to prevent releases due to structural failure, corrosion or spills and overfills for as long as the UST system is used to store regulated substances, owners and operators of new UST systems shall meet the following requirements.

a) Tanks. Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

1) The tank is constructed of fiberglass-reinforced plastic; or

BOARD NOTE: The following industry codes, incorporated by reference in Section 731.113, may be used to comply with this subsection: UL 1316; UL Canada Standard CAN4-S615; or ASTM D4021.

2) The tank is constructed of steel and cathodically protected in the following manner:

A) The tank is coated with a suitable dielectric material;

B) Field-installed cathodic protection systems are designed by

a corrosion expert;

C) Impressed current systems are designed to allow determination of current operating status as required in Section 731.131(c);

D) Cathodic protection systems are operated and maintained in accordance with Section 731.131; or

BOARD NOTE: The following codes and standards, incorporated by reference in Section 731.113, may be used to comply with this subsection: STI-P3; UL 1746; UL Canada Standard CAN4-S603, CAN4-S603.1 and CAN4-S631; NACE RP0285 or UL 58.

3) The tank is constructed of a steel-fiberglass-reinforced-plastic composite; or

BOARD NOTE: The following industry codes, incorporated by reference in Section 731.113, may be used to comply with this subsection: UL 1746 or ACT-100.

4) The tank is constructed of metal without additional corrosion protection measures provided that:

A) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and

B) Owners and operators maintain records that demonstrate compliance with the requirements of subsection (a)(4)(A) for the remaining life of the tank.

b) Piping. The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

1) The piping is constructed of fiberglass-reinforcing plastic; or

BOARD NOTE: The following codes and standards, incorporated by reference in Section 731.113, may be used to comply with this subsection: UL 567; UL Canada Subject C107C; UL Canada Standard CAN4-S633.

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

A) The piping is coated with a suitable dielectric material;

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

C) Impressed current systems are designed to allow determination of current operating status as required in Section 731.131(c).

D) Cathodic protection systems are operated and maintained in accordance with Section 731.131; or

BOARD NOTE: The following codes and standards, incorporated by reference in Section 731.113, may be used to comply with this subsection: NFPA 30; API Recommended Practice 1615; API Recommended Practice 1632; NACE RP0169.

3) The piping is constructed of metal without additional corrosion protection measures provided that:

A) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

B) Owners and operators maintain records that demonstrate compliance with the requirements of subsection (b)(3)(A) for the remaining life of the piping; or

BOARD NOTE: NFPA 30 and NACE RP0169, incorporated by reference in Section 731.113, may be used to comply with this subsection.

c) Spill and overfill prevention equipment.

1) Except as provided in subsection (c)(2), to prevent spilling and overfilling associated with product transfer to the UST system, owners and operators shall use the following spill and overfill prevention equipment:

A) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

B) Overfill prevention equipment that will:

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

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

2) Owners and operators are not required to use the spill and overfill prevention equipment specified in subsection (c)(1) if: The UST system is filled by transfers of no more than 25 gallons at one time.

d) Installation. All tanks and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

BOARD NOTE: Tank and piping system installation practices and procedures described in the following codes, incorporated by reference in Section 731.113, may be used to comply with the requirements this subsection: API Recommended Practice 1615; PEI/RP100; or ANSI/ASME B31.3 and B31.4.

e) Certification of installation. All owners and operators shall ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subsection (d) by providing a certification of compliance on the UST notification form in accordance with Section 731.122.

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

2) The installer has been certified or licensed by the Fire Marshal; or

3) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or

4) The installation has been inspected and approved by the Fire Marshal; or

5) All work listed in the manufacturer's installation checklists has been completed.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.121 Upgrading of Existing Systems

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

1) New UST system performance standards under Section 731.120;

2) The upgrading requirements in subsections (b) through (d); or

3) Closure requirements under Subpart G, including applicable requirements for corrective action under Subpart F.

b) Tank upgrading requirements. Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

1) Interior lining. A tank may be upgraded by internal lining if:

A) The lining is installed in accordance with the requirements of Section 731.133, and

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

2) Cathodic protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of Section 731.120(a)(2)(B), (C) and (D) and the integrity of the tank is ensured using one of the following methods:

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

B) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with Section 731.143(d) through (h); or

C) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of Section 731.143(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system.

3) Internal lining combined with cathodic protection. A tank may be upgraded by both internal lining and cathodic protection if:

A) The lining is installed in accordance with the requirements of Section 731.133; and

B) The cathodic protection system meets the requirements of Section 731.120(a)(2)(B), (C) and (D):

BOARD NOTE: The following codes and standards, incorporated by reference in Section 731.113, may be used to comply with this Section: API Recommended Practice 1631; NACE RP0285 and, API Recommended Practice 1632.

c) Piping upgrading requirements. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodially protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of Section 731.120(b)(2)(B), (C) and (D).

BOARD NOTE: The codes and standards listed in the note following Section 731.120(b)(2) may be used to comply with this requirement.

d) Spill and overfill prevention equipment. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in Section 731.120(c).

(Source: Added at 13 Ill. Reg. , effective)

Section 731.122 Notification Requirements

a) Any owner who brings an underground storage tank system into use after May 8, 1986, shall within 30 days of bringing such tank into use, submit, in the form prescribed in Appendix A, a notice of existence of such tank system to the Fire Marshal.

BOARD NOTE: Owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the Fire Marshal in accordance with RCRA and 40 CFR 280.3 (1987), unless notice was given pursuant to 40 CFR 302.6, incorporated by reference in Section 731.113. Section 4(b)(1) of the Gasoline Act (Ill. Rev. Stat. 1987, ch. 127 1/2, par. 156(b)(1)) required notification by December 31, 1987, for tanks which held regulated substances after January 1, 1974. Owners and operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in Appendix A.

c) Owners required to submit notices under subsection (a) shall provide notices to the Fire Marshal for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation shall file a separate notification form for each separate place of operation.

d) Notices required to be submitted under subsection (a) must provide all of the information in Sections I through VI of the form for each tank for which notice must be given. Notices for tanks installed after December 22, 1988, must also provide all of the information in Section VII of the prescribed form for each tank for which notice must be given.

e) All owners and operators of new UST systems shall certify in the notification form compliance with the following requirements:

1) Installation of tanks and piping under Section 731.120(e);

2) Cathodic protection of steel tanks and piping under Section 731.120(a) and (b);

3) Financial responsibility under Subpart H; and

4) Release detection under Sections 731.141 and 731.142.

f) All owners and operators of new UST systems shall ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in Section 731.120(d).

g) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank shall notify the purchaser of such tank of the owner's notification obligations under subsection (a). The form provided in Appendix C may be used to comply with this requirement.

(Source: Added at 13 Ill. Reg. , effective)

SUBPART C: GENERAL OPERATING REQUIREMENTS

Section 731.130 Spill and Overfill Control

a) Owners and operators 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.

BOARD NOTE: The transfer procedures described in NFPA 385, incorporated by reference in Section 731.113, may be used to comply with this subsection. Further guidance on spill and overfill prevention appears in API Recommended Practice 1621 and NFPA Standard 30.

b) The owner and operator shall report, investigate and clean up any spills and overfills in accordance with Section 731.153.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.131 Operation and Maintenance of Corrosion Protection

All owners and operators of steel UST systems with corrosion protection shall comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

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

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

1) Frequency. All cathodic protection systems must be tested

within 6 months of installation and at least every 3 years thereafter; and

2) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this Section must be in accordance with a code of practice developed by a nationally recognized association.

BOARD NOTE: NACE RP0285, incorporated by reference in Section 731.113, may be used to comply with subsection (b)(2).

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

d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with Section 731.134) to demonstrate compliance with the performance standards in this Section. These records must provide the following:

1) The results of the last three inspections required in subsection (c); and

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

(Source: Added at 13 Ill. Reg. , effective)

Section 731.132 Compatibility

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.

BOARD NOTE: Owners and operators storing alcohol blends may use the following codes, incorporated by reference in Section 731.113, to comply with the requirements of this Section: API Recommended Practice 1626 and 1627.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.133 Repairs Allowed

Owners and operators of UST systems shall ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

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

BOARD NOTE: The following codes and standards, incorporated by reference in Section 731.113, may be used to comply with this subsection: NFPA 30; API Publication 2200; and API Recommended Practice 1631.

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

c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

d) Repaired tanks and piping must be tightness tested in accordance with Section 731.143(c) and Section 731.144(b) within 30 days following the date of the completion of the repair except as follows:

1) The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in Section 731.143(d) through (h).

e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with Section 731.131(b) and (c) to ensure that it is operating properly.

f) UST system owners and operators shall maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this Section.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.134 Reporting and Recordkeeping

Pursuant to Section 4(d) of the Act and Section 4(d) of the Gasoline Act (Ill. Rev. Stat. 1987, ch. 127 1/2, par. 154(d)), owners and operators of UST systems shall cooperate fully with inspections, monitoring and testing conducted by the Fire Marshal or Agency, as well as requests for document submission, testing and monitoring by the owner or operator.

a) Reporting. Owners and operators shall submit the following information to the Fire Marshal or Agency:

1) Notification for all UST systems (Section 731.122), which includes certification of installation for new systems (Section 731.120(e));

2) Reports of all releases including suspected releases (Section 731.150), spills and overfills (Section 731.153), and confirmed releases (Section 731.161);

3) Corrective actions planned or taken including initial abatement

measures (Section 731.162), initial site characterization (Section 731.163), free product removal (Section 731.164), investigation of soil and groundwater cleanup (Section 731.165), and corrective action plan (Section 731.166); and

4) A notification before permanent closure or change-in-service (Section 731.171).

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

1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (Section 731.120(a)(4) and (b)(3)).

2) Documentation of operation of corrosion protection equipment (Section 731.131);

3) Documentation of UST system repairs (Section 731.133(f));

4) Recent compliance with release detection requirements (Section 731.145); and

5) Results of the site investigation conducted at permanent closure (Section 731.174).

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

1) At the UST site and immediately available for inspection by the Fire Marshal or Agency; or

2) At a readily available alternative site and be provided for inspection to the Fire Marshal or Agency upon request.

BOARD NOTE: In the case of permanent closure records required under Section 731.174, owners and operators are also provided with the additional alternative of mailing closure records to the Fire Marshal if they cannot be kept at the site or an alternative site as indicated above.

(Source: Added at 13 Ill. Reg. , effective)

SUBPART D: RELEASE DETECTION

Section 731.140 General Requirements for all Systems

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

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

2) Is installed, calibrated, operated and maintained in accordance

with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

3) Meets the performance requirements in Sections 731.143 or 731.144, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after December 22, 1990, except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in Section 731.143(b), (c) and (d) or Section 731.144(a) and (b), with a probability of detection of 0.95 and a probability of false alarm of 0.05.

b) When a release detection method operated in accordance with the performance standards in Section 731.143 and 731.144 indicates a release may have occurred, owners and operators shall notify ESDA in accordance with Subpart E.

c) Owners and operators of UST systems shall comply with the release detection requirements of this Subpart in accordance with the following schedule:

1) For all pressurized piping in accordance with Section 731.141(b)(1) and 731.142(b)(4), by December 22, 1990.

2) For tanks and suction piping in accordance with Section 731.141(a), 731.141(b)(2) and 731.142 for tanks:

A) With an unknown installation date, by December 22, 1989.

B) Installed before 1965, by December 22, 1989.

C) Installed in 1965 through 1969, by December 22, 1990.

D) Installed in 1970 through 1974, by December 22, 1991.

E) Installed in 1975 through 1979, by December 22, 1992.

F) Installed in 1980 through December 22, 1988, by December 22, 1993.

G) Installed after December 22, 1988, immediately upon installation.

d) Any existing UST system that cannot apply a method of release detection that complies with the requirements of this Subpart must complete the closure procedures in Subpart G by the date on which release detection is required for that UST system under subsection (c).

(Source: Added at 13 Ill. Reg. , effective)

Section 731.141 Petroleum Systems

Owners and operators of petroleum UST systems shall provide release detection for tanks and piping as follow:

a) Tanks. Tank must be monitored at least every 30 days for releases using one of the methods listed in Section 731.143(d) through (h) except that:

1) UST systems that meet the performance standards in Section 731.120 or Section 731.121, and the monthly inventory control requirements in Section 731.143(a) or (b), may use tank tightness testing (conducted in accordance with Section 731.143(c) at least every 5 years until December 22, 1998 or until 10 years after the tank is installed or upgraded under Section 731.121(b), whichever is later.

2) UST systems that do not meet the performance standards in Section 731.120 or 731.121, may use monthly inventory controls (conducted in accordance with Section 731.143(a) or (b)) and annual tank tightness testing (conducted in accordance with Section 731.143(c)) until December 22, 1998, when the tank must be upgraded under Section 731.121 or permanently closed under Section 731.171; and

3) Tanks with capacity of 550 gallons or less may use weekly tank gauging (conducted in accordance with Section 731.143(b)).

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

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

A) Be equipped with an automatic line leak detector conducted in accordance with Section 731.144(a); and

B) Have an annual line tightness test conducted in accordance with Section 731.144(b) or have monthly monitoring conducted in accordance with Section 731.144(c).

2) Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with Section 731.144(b), or use a monthly monitoring method conduct in accordance with Section 731.144(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

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

B) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the

suction is released;

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

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

E) A method is provided that allows compliance with subsections (b)(2)(B) through (b)(2)(D) to be readily determined.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.142 Hazardous Substance Systems

Owners and operators of hazardous substance UST systems shall provide release detection that meets the following requirements:

a) Release detection at existing UST systems must meet the requirements for petroleum UST systems in Section 731.141. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new systems in subsection (b).

b) Release detection at new hazardous substance UST systems must meet the following requirements:

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

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

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

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

BOARD NOTE: 35 Ill. Adm. Code 725.293 may be used to comply with these requirements.

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

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

B) Detect the failure of the inner wall.

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

A) Contain 100 percent of the capacity of the largest tank

within its boundary;

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

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

4) Underground piping must be equipped with secondary containment that satisfies the requirements of subsection (b)(1) (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with Section 731.144(a).

(Source: Added at 13 Ill. Reg. , effective)

Section 731.143 Tanks

Each method of release detection for tanks used to meet the requirements of Section 731.141 must be conducted in accordance with the following:

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

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

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

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

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

5) Product dispensing is metered and recorded within an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

BOARD NOTE: Metering of petroleum products is regulated by the Illinois Department of Agriculture pursuant to Sections 8 and 43 of the Weights and Standards Act (Ill. Rev. Stat. 1987, ch. 147, pars. 108 and 143) and 8 Ill. Adm. Code 600.120 and 600.650 et seq. In that these regulations do not specify the accuracy of metering, owners or operators need to obtain an independent certification of meter accuracy prior to using this Section.

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

BOARD NOTE: Practices described in the API Recommended Practice 1621, incorporated by reference in Section 731.113, may be used, where applicable, as guidance in meeting the requirements of this subsection.

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

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

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

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

4) A leak is suspected and subject to the requirements of Subpart E if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity (Gallons)	Weekly Standard (One Test) (Gallons)	Monthly Standard (Average of Four Tests) (Gallons)
550 or less	10	5
551 to 1000	13	7
1001 to 2000	26	13

5) Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in Section 731.143(a). Tanks of greater than 2,000 gallons nominal capacity must not use this method to meet the requirements of this Subpart.

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

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

1) The automatic product level monitor test can detect a 0.2 gallon

per hour leak rate from any portion of the tank that routinely contains product; and

2) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of Section 731.143(a).

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

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

2) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

3) The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

4) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

5) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

6) In the UST excavation zone, the site is assessed to ensure compliance with subsection (e)(1) through (e)(4) and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

7) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

f) Groundwater monitoring. Testing or monitoring for liquids on the groundwater must meet the following requirements:

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

2) Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soils between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec. (e.g., the soil must consist of gravels, coarse to

medium sands, coarse silts or other permeable materials);

3) The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low groundwater conditions;

4) Monitoring wells must be sealed from the ground surface to the top of the filter pack;

5) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

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

7) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in subsection (f)(1) through (f)(5) and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

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

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

BOARD NOTE: The provisions outlined in STI, "Standard for Dual Wall Underground Storage Tank", incorporated by reference in Section 731.113, may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.

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

A) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at most 0.000001 cm/sec (ten to the minus six) for the regulated substance stored) to direct a release to the monitoring point and permit its

detection;

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

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

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

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

F) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

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

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

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

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

(Source: Added at 13 Ill. Reg. , effective)

Section 731.144 Piping

Each method of release detection for piping used to meet the requirements of Section 731.141 must be conducted in accordance with the following:

a) Automatic line leak detectors. A method which alerts the operator to the presence of a leak by restricting or shutting off the flow of

regulated substances through piping or triggering an audible or visual alarm may be used only if it detects leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

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

c) Applicable tank methods. Any of the methods in Section 731.143(e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.145 Recordkeeping

All UST system owners and operators shall maintain records in accordance with Section 731.134 demonstrating compliance with all applicable requirements of this Subpart. These records must include the following:

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

b) The results of any sampling, testing or monitoring must be maintained for at least 1 year, except that the results of tank tightness testing conducted in accordance with Section 731.143(c) must be retained until the next test is conducted; and

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

(Source: Added at 13 Ill. Reg. , effective)

SUBPART E: RELEASE REPORTING, INVESTIGATION AND CONFIRMATION

Section 731.150 Reporting of Suspected Releases

Owners and operators of UST systems shall report to the ESDA within 24 hours and follow the procedures in Section 731.152 for any of the following conditions:

a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines or nearby surface water).

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

c) Monitoring results from a release detection method required under Section 731.141 and Section 731.142 that indicate a release may have occurred unless:

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

2) In the case of inventory control, a second month of data does not confirm the initial result.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.151 Investigation due to Off-site Impacts

When required by the Fire Marshal, owners and operators of UST systems shall follow the procedures in Section 731.152 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines or nearby surface and drinking waters) that has been observed by the Fire Marshal or brought to its attention by another person. The Fire Marshal shall require such an investigation by way of a letter or an oral order followed by a written confirmation.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.152 Release Investigation and Confirmation

Unless corrective action is initiated in accordance with Subpart F, owners and operators shall immediately investigate and confirm all suspected releases of regulated substances requiring reporting under Section 731.150 within 7 days, using the following steps:

a) System test. Owners and operators shall conduct tests (according to the requirements for tightness testing in Section 731.143(c) and Section 731.144(b)) that determine whether a leak exists in that portion of the tank that routinely contains product, or the attached delivery piping, or both.

1) Owners and operators shall repair, replace or upgrade the UST system, and begin corrective action in accordance with Subpart F if the test results for the system, tank or delivery piping indicate that a leak exists.

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

suspecting a release.

3) Owners and operators shall conduct a site check as described in subsection (b) if the test results for the system, tank and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

b) Site check. Owners and operators shall measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, owners and operators shall consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of groundwater and other factors appropriate for identifying the presence and source of the release.

1) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators shall begin corrective action in accordance with Subpart F;

2) If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.153 Reporting and Cleanup of Spills and Overfills

a) Owners and operators of UST systems shall contain and immediately clean up a spill or overfill and report to the Fire Marshal within 24 hours, and begin corrective action in accordance with Subpart F in the following cases:

1) Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons, or that causes a sheen on nearby surface water; and

2) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under 40 CFR 302.4 and 302.5, incorporated by reference in Section 731.113.

b) Owners and operators of UST systems shall contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons, and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, owners and operators shall immediately notify ESDA.

BOARD NOTE: Under 40 CFR 302.6 and 355.40, incorporated by reference in Section 731.113, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center (800/424-8802). In addition, 35 Ill. Adm. Code 750.410 requires notification of the ESDA (800/782-7860).

(Source: Added at 13 Ill. Reg. , effective)

SUBPART F: RELEASE RESPONSE AND CORRECTIVE ACTION

Section 731.160 General

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this Subpart except for USTs excluded under Section 731.110(b) and UST systems subject to RCRA corrective action requirements under 35 Ill. Adm. Code 724.200, 724.296, 725.296 or 725.Subpart G.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.161 Initial Response

Upon confirmation of a release in accordance with Section 731.152 or after a release from the UST system is identified in any other manner, owners and operators shall perform the following initial response actions within 24 hours of a release:

a) Report the release to the ESDA (e.g., by telephone or electronic mail);

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

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

(Source: Added at 13 Ill. Reg. , effective)

Section 731.162 Initial Abatement Measures and Site Check

a) Owners and operators shall perform the following abatement measures:

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

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

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

4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator shall comply with 35 Ill. Adm. Code 722, 724, 725, 807 and 809.

5) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by Section 731.152(b) or the closure site assessment of Section 731.172(a). In selecting sample types, sample locations and measurement methods, the owner and operator shall consider the nature of the stored substance, the type of backfill, depth to groundwater and other factors as appropriate for identifying the presence and source of the release; and

6) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with Section 731.164.

b) Within 20 days after release confirmation, owners and operators shall submit a report to the Agency, summarizing the initial abatement steps taken under subsection (a) and any resulting information or data.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.163 Initial Site Characterization

a) Owners and operators shall assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in Section 731.160 and Section 731.161. This information must include, but is not necessarily limited to the following:

1) Data on the nature and estimated quantity of release;

2) Data from available sources or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions and land use;

3) Results of the site check required under Section 731.162(a)(5); and

4) Results of the free product investigations required under Section 731.162(a)(6), to be used by owners and operators to determine whether free product must be recovered under Section 731.164.

b) Within 45 days after confirmation of the release, owners and operators shall submit the information collected in compliance with subsection (a) to the Agency, in a manner that demonstrates its applicability and technical adequacy.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.164 Free Product Removal

At sites where investigations under Section 731.162(a)(6) indicate the presence of free product, owners and operators shall remove free product to the maximum extent practicable, while continuing, as necessary, any actions initiated under Section 731.161 through Section 731.163, or preparing for actions required under Section 731.165 through Section 731.166. In meeting the requirements of this Section, owners and operators must:

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

b) Use abatement of free product migration as a minimum objective for the design of the free product removal system;

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

d) Prepare and submit to the Agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

1) The name of the persons responsible for implementing the free product removal measures;

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

3) The type of free product recovery system used;

4) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

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

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

7) The disposition of the recovered free product.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.165 Investigations for Soil and Groundwater Cleanup

a) In order to determine the full extent and location of soils contaminated by the release, and the presence and concentrations of dissolved product contamination in the groundwater, owners and operators shall conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

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

2) Free product is found to need recovery in compliance with Section 731.164;

3) There is evidence that contaminated soils may be in contact with groundwater (e.g., as found during conduct of the initial response measures or investigations required under Section 731.160 through Section 731.164); and

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

b) Owners and operators shall submit the information collected under subsection (a) as soon as practicable or in accordance with a schedule established by the Agency.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.166 Corrective Action Plan

a) At any point after reviewing the information submitted in compliance with Section 731.161 through Section 731.163, the Agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators shall submit the plan according to a schedule and format established by the Agency. Alternatively, owners and operators may, after fulfilling the requirements of Section 731.161 through Section 731.163, choose to submit a corrective action plan for responding to contaminated soil and groundwater.

b) The Agency shall approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety and the environment. In making this determination, the Agency shall consider the following factors as appropriate:

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

2) The hydrogeologic characteristics of the facility and the surrounding area;

3) The proximity quality and current and future uses of nearby surface water and groundwater;

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

5) An exposure assessment; and

6) Any information assembled in compliance with this Subpart.

c) Upon approval of the corrective action plan or as directed by the Agency, owners and operators shall implement the plan, including modifications to the plan made by the Agency. They shall monitor, evaluate and report the results of implementing the plan in accordance with a schedule and in a format established by the Agency.

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

1) Notify the Agency of their intention to being cleanup;

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

3) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the Agency.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.167 Public Participation

a) For each confirmed release that requires a corrective action plan, the Agency shall provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice must include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in the Illinois Register, letters to individual household or personal contacts by field staff.

b) The Agency shall ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

c) Before approving a corrective action plan, the Agency shall hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reasons.

d) The Agency shall give public notice that complies with subsection (a) if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the Agency.

(Source: Added at 13 Ill. Reg. , effective)

SUBPART G: OUT-OF-SERVICE SYSTEMS AND CLOSURE

Section 731.170 Temporary Closure

a) When an UST system is temporarily closed, owners and operators shall continue operation and maintenance of corrosion protection in accordance with Section 731.131, and any release detection in accordance with Subpart D. Subparts E and F must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

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

1) Leave vent lines open and functioning; and

2) Cap and secure all other lines, pumps, manways and ancillary equipment.

c) When an UST system is temporarily closed for more than 12 months, owners and operators shall permanently close the UST system if it does not meet either performance standards in Section 731.120 for new UST systems or the upgrading requirements in Section 731.121, except that the spill and overfill equipment requirements do not have to be met. Owners and operators shall permanently close the substandard UST systems at the end of this 12-month period in accordance with Section 731.171 through Section 731.174.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.171 Permanent Closure and Changes-in-service

a) At least 30 days before beginning either permanent closure or a change-in-service under subsections (b) or (c), owners and operators shall notify the Fire Marshal of their intent to permanently close or make the change-in-service, unless such action is in response to corrective action. The required assessment of the excavation zone under Section 731.172 must be performed after notifying the Fire Marshal but before completion of the permanent closure or a change-in-service.

b) To permanently close a tank, owners and operators shall empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled it with an inert soild material.

c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators shall empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance

with Section 731.172.

BOARD NOTE: The following cleaning and closure procedures, incorporated by reference in Section 731.113, may be used to comply with this Section: API Recommended Practice 1604; API Publication 2015; API Recommended Practice 1631. NIOSH Publication No. 80-106 may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.172 Assessing Site at Closure or Change-in-Service

a) Before permanent closure or a change-in-service is completed, owners and operators shall measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations and measurement methods, owners and operators shall consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater and other factors appropriate for identifying the presence of a release. The requirements of this Section are satisfied if one of the external release detection methods allowed in Section 731.143(e) and (f) is operating in accordance with the requirements in Section 731.143 at the time of closure, and indicates no release has occurred.

b) If contaminated soils, contaminated groundwater or free product as a liquid or vapor is discovered under subsection (a), or by any other manner, owners and operators shall begin corrective action in accordance with Subpart F.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.173 Previously Closed Systems

When directed by the Fire Marshal, the owner and operator of an UST system permanently closed before December 22, 1988, shall assess the excavation zone and close the UST system in accordance with this Subpart if releases from the UST may, in the judgment of the Fire Marshal, pose a current or potential threat to human health or the environment.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.174 Closure Records

Owners and operators shall maintain records in accordance with Section 731.134 that are capable of demonstrating compliance with closure requirements under this Subpart. The results of the excavation zone assessment required in Section 731.172 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

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

b) By the current owners and operators of the UST system site; or

c) By mailing these records to the Fire Marshal if they cannot be maintained at the closed facility.

(Source: Added at 13 Ill. Reg. , effective)

Section 731.900 Incorporation by reference (Repealed)

~~a) The Board incorporates the following material by reference: "Field Method of Soil resistivity Using the Wenner Four-Electrode Method", ASTM G57-78 (Reapproved 1984), available from the American Society for Testing and Materials, 1916 Race Sheet, Philadelphia, PA 19103, 215/299-5400.~~

~~b) This incorporation includes no future revisions or editions.~~

(Source: Repealed at 13 Ill. Reg. , effective)

Section 731.901 Compliance Date (Repealed)

~~Compliance with this Part shall be required after the day on which the United States Environmental Protection Agency authorizes the State of Illinois to administer the underground storage tank program pursuant to the Resource Conservation and Recovery Act.~~

(Source: Repealed at 13 Ill. Reg. , effective)

IT IS SO ORDERED

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 27th day of April, 1989, by a vote of 7-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board