PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 245]

Storage Tank Technical Standards

The Environmental Quality Board (Board) proposes to amend Chapter 245 (relating to administration of the storage tank and spill prevention program). This proposal amends, adds and deletes several definitions. The proposal also contains an incorporation of the Federal underground storage tank regulations (found at 40 CFR Part 280 (relating to technical standards for owners and operators of underground storage tanks)) with minor changes and additions. Finally, the proposed amendments create new subchapters to establish a permitting program for storage tanks as well as separate technical and operational standards for small and large aboveground storage tanks.

This proposal was adopted by the Board at its meeting of April 16, 1996.

A. *Effective Date*

These proposed amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final rulemaking.

B. *Contact Persons*

For further information, contact Karl K. Sheaffer, Chief, Division of Storage Tanks, P.O. Box 8762, Rachel Carson State Office Building, Harrisburg, PA 17105-8762, telephone: (717) 772-5800; or Kurt E. Klapkowski, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, telephone: (717) 787-7060. Information regarding submitting comments on this proposal appears in Section J of this Preamble. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users) and request that they relay the call. This proposal is available electronically through the Department of Environmental Protection (Department) Web site (http://www.dep.state.pa.us).

C. *Statutory Authority*

This proposal is being made under the authority of section 106 of the Storage Tank and Spill Prevention Act (act) (35 P. S. § 6021.106), which authorizes the Board to adopt rules and regulations of the Department governing aboveground and underground storage tanks to accomplish the purposes and carry out the provisions of the act; section 301(a) of the act (35 P. S. § 6021.301(a)), which requires the Department to establish a regulatory program for aboveground storage tanks; section 301(b) of the act (35 P. S. § 6021.301(b)), which allows the Department to establish classes and categories of aboveground storage tanks; section 301(d) of the act (35 P. S. § 6021.301(d)), which requires the Department to develop a "simplified" regulatory program for small aboveground storage tanks; section 304 of the act (35 P. S. § 6021.304), which establishes permitting requirements for aboveground storage tanks; section 501 of the act (35 P. S. § 6021.501), which requires the Department to develop a regulatory program for underground storage tanks; section 501(b) of the act, which allows the Department to establish classes and categories of underground storage tanks; section 504 of the act (35 P. S. § 6021.504), which establishes permitting requirements for underground storage tanks; section 1101 of the act (35 P. S. § 6021.1101), which establishes permitting requirements for new aboveground storage tank facilities; section 1102 of the act (35 P. S. § 6021.1102), which requires the Board to develop siting regulations for new aboveground storage tank facilities; section 5(b)(1) of The Clean Streams Law (35 P. S. § 691.5(b)(1)), which authorizes the Department to formulate, adopt and promulgate rules and regulations that are necessary to implement the provisions of The Clean Streams Law; and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20), which authorizes the Board to formulate, adopt and promulgate rules and regulations that may be determined by the Board to be for the proper performance of the work of the Department.

D. *Background*

This rulemaking package represents the final major new rulemaking package for implementation of the Commonwealth's storage tank program. Although amendments to the existing regulations in Chapter 245 may be forthcoming as a result of the Department's Regulatory Basics Initiative (a Departmental analysis of its existing regulations), this proposed rulemaking package covers the last major areas identified by the act as required to be covered by regulation. Sections 301(a) and 501(a) of the act outline the regulatory program the Department is required to develop for aboveground and underground storage tanks, respectively. These sections of the act mandate a regulatory program that includes, at a minimum, standards for the following: registration and permitting of storage tanks; release detection; periodic inspections of facility operation; inventory control; records maintenance; construction, testing, operation, repair and reuse of storage tanks; corrosion and release prevention; removal of storage tanks from service and closure reporting requirements. These sections also grant the Department the authority to issue permits by rule to certain classifications of storage tanks.

The major new proposal in this package is the adoption of Subchapters F and G (relating to technical standards for aboveground storage tanks and facilities; and simplified program for small aboveground storage tanks), which contain a comprehensive regulatory program for large and small aboveground storage tanks, respectively. Because the Federal government adopted underground storage tank regulations in 1988, the focus of the Commonwealth's storage tank program has been almost exclusively on those storage tanks, both from regulatory and compliance standpoints. While much work remains to be done in the underground storage tank arena, the Environmental Protection Agency's (EPA) 1998 deadline for the upgrading or closure of underground storage tanks is fast approaching. The Department expects that the passage of this National deadline should free up some resources previously devoted to outreach efforts in the underground storage tank program.

It should be recalled that the major impetus for the passage of the act in 1989 was the collapse of a large Ashland Oil aboveground storage tank on the Monongahela River in western Pennsylvania. These proposed subchapters represent an attempt to have standards of performance in place for the time when program priorities are able to shift more to the aboveground side

of the storage tank equation. It should also be noted that many owners/operators are switching from underground to aboveground storage of regulated substances. The Department is concerned that this switch not take place in a vacuum but be carried out in an environmentally safe manner. As discussed as follows, these proposed amendments mainly require owners/operators to follow existing, Nationally-recognized industry standards. These standards are already acknowledged by the regulated community as sound business practice, from both environmental and economic perspectives.

Subchapter E (relating to technical standards for underground storage tanks) represents the Department's attempt to address Statewide concerns about the Commonwealth's underground storage tank program. The Commonwealth incorporated the Federal underground storage tank regulations in 40 CFR Part 280 by reference at 21 Pa.B. 4345 (September 20, 1991). Since that time, the interaction between the Commonwealth's storage tank program and the Federal regulations has been a source of confusion for both the Department and the regulated community.

In addition, 7 years have passed since 40 CFR Part 280 became effective in 1988, and changes are required to keep the program current. An example of this would be statistical inventory reconciliation (SIR). SIR represents an alternative method, developed in the last several years, for meeting EPA's inventory control requirements. Although EPA has developed an SIR protocol, there are no Federal regulatory requirements yet for SIR. By developing formal SIR rules modeled on the EPA policy, vendors of these services and their customers (the owners and operators of underground storage tanks in this Commonwealth) will know exactly what is acceptable and what is not.

For these reasons, the Department believes that having all underground storage tank requirements in one place (Chapter 245), as well as updating the underground storage tank regulations where necessary, is appropriate at this time. For the most part, the Federal regulations are codified unchanged. Where they have been altered, the change is noted and discussed in Section E of this Preamble.

Finally, the Department believes that the permitting provisions of the act are confusing and overly burdensome on tank owners and operators. Therefore, the Department is proposing the adoption of Subchapter C (relating to permitting of underground and aboveground storage tank systems and facilities), which contains regulations and waiver of permit fees for all operating permits. These changes should clarify exactly when a permit is required, when the permit is no longer valid and how an owner/operator goes about obtaining the required permits. These proposals also implement the requirements of Chapter 11 of the act (35 P. S. §§ 6021.1101 and 6021.1102).

The Department worked closely with informal technical advisory committees, as well as the Storage Tank Advisory Committee (STAC), during development of these proposed amendments. STAC, which was established by section 105 of the act (35 P. S. § 6021.105), consists of persons representing a cross-section of organizations having a direct interest in the regulation of storage tanks in this Commonwealth. As required by section 105 at the act, STAC has been given the opportunity to review and comment on these proposed amendments. At meetings on April 18, June 20, August 15 and October 24, 1995, STAC reviewed and discussed the proposed amendments. At the October meeting, STAC prepared a written report on the proposed amendments which will be presented to the Board. A listing of members of STAC may be obtained from Karl Sheaffer, whose address appears in Section B of this Preamble.

E. *Summary and Purpose of Proposed Rulemaking*

A brief description of the proposed amendments is as follows:

Subchapter A. General Provisions

1. *Section 245.1 Definitions.*

Section 245.1 is proposed to be amended by adding definitions, adopting definitions from 40 CFR Part 280 with minor changes and by modifying existing definitions used in this proposed rulemaking. The terms added are: "coax vapor recovery," "combination of tanks," "corrosion protection," "de minimis," "emergency containment," "highly hazardous substance tank," "large aboveground storage tank facility" and "reconstruction." The definition of "highly hazardous substance tank" is based on reportable quantities of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) substances found in 40 CFR 302.4.

The definitions adopted from 40 CFR Part 280 with minor changes are: "beneath the surface of the ground," "CERCLA," "cathodic protection tester," "compatible," "connected piping," "consumptive use," "corrosion expert," "dielectric material," "electric equipment," "excavation zone," "existing underground storage tank system," "gathering lines," "hazardous substance storage tank system," "heating oil," "hydraulic lift tank," "liquid trap," "motor fuel," "new underground storage tank system," "noncommercial purposes," "on the premises where stored," "operational life," "overfill," "petroleum system," "pipe," "piping," "pipeline facilities (including gathering lines)," "residential tank," "SARA," "septic tank," "stormwater or wastewater collection system," "surface impoundment," "tank," "underground area," "upgrade," "underground storage tank system" and "wastewater treatment tank."

The existing definitions in § 245.1 that were amended or modified are: "aboveground storage tank," "removal from service" and "underground storage tank." The "aboveground storage tank" definition is proposed to be modified to deregulate certain categories of tanks. The definition of "underground storage tank" is proposed to be modified to more closely follow the Federal definition. The definition of "removal from service" is proposed to be amended to provide more clarification.

2. *Section 245.2. General.*

Section 245.2 is proposed to be amended to remove the reference incorporating the Federal regulations governing underground storage tank systems contained in 40 CFR Part 280. These technical requirements are proposed to be codified in Subchapter E.

Section 245.2 is proposed to be further amended to adopt, by reference, Federal regulations at 40 CFR Part 280, Subpart I (relating to lender liability). By adopting this rule by reference, the Department will have regulations in place that provide clear protection to lending institutions who hold a financial interest in underground storage tanks. This rule clearly defines what represents a financial versus control interest for lending institutions. It compliments Act 3 of 1995 and works in concert with the goals of Act 2 of 1995. Through this rule, lending institutions should be more willing to take possession of forfeited underground storage tank sites, loan money for upgrades and invest in the development of new sites.

Subchapter C. Permitting of Underground and Aboveground Storage Tank Systems and Facilities.

1. *Section 245.201. Scope.*

This section outlines the scope of Subchapter C. Section 304(a) of the act states that a person may not install, construct, erect, modify, operate or remove from service, all or part of an aboveground storage tank unless the person has first obtained a permit from the Department. Similar language is found in section 504(a) of the act for underground storage tanks.

2. *Section 245.202. Public records and confidential information.*

This section contains standard boilerplate language regarding public availability of permitting information and establishes rules for confidentiality of certain portions of a permit application. Specifically, unless the application contains trade secrets, processes, operations, styles of work or apparatus of a person or is otherwise confidential business information, information shall be made available for public inspection or copying during regular business hours of the Department.

3. *Section 245.203. General requirements for a permit.*

As a matter of rule, a person may not operate an aboveground or underground storage tank system unless the person has first applied for and received a permit for the activity from the Department.

Subsection (b) excludes permitting applications for those storage tank systems that qualify for a permit by rule if the person maintains and operates the system in compliance with applicable rules, regulations and laws of the Department. Failure to do so may result in administrative or other Departmental actions against the owner/operator.

Subsection (c) allows existing storage tank systems to continue to operate until the Department may request a permit application or permitting information, if the system is operated in compliance with applicable rules, regulations and laws of the Department.

Subsection (d) allows continued operation until the Department takes a final action on the permit application.

Finally, subsection (e) requires that a permit first be obtained from the Department before a new storage tank system accepts a regulated substance.

4. *Section 245.204. Form of the application.*

Permit applications must be submitted to the Department in writing, on forms provided by the Department. The information must be concise and supported by proper reference.

5. *Section 245.205. Right of entry.*

Section 107(c)(3) of the act (35 P. S. § 6021.107(c)(3)) empowers the Department to enter storage tank facilities for the purpose of inspection or otherwise enforcing the act.

This proposed amendment requires tank owners/operators to provide irrevocable written consent to the Commonwealth and its authorized agents to enter the permitted area. For simplicity, the annual storage tank registration form has been modified to provide this written consent. Failure to register or sign the registration form, therefore, is a violation of the permit and could result in suspension, revocation, modification or other actions against the facility owner/operator.

6. *Section 245.206. Verification of application.*

This section requires that the official who is responsible for the applicant's storage tanks sign the permit application form. It is up to the applicant to determine who that official should be.

7. *Section 245.207. Permit fee.*

This section establishes permitting fees for site-specific installation permits for: (1) new highly hazardous substance storage tanks in excess of 1,100 gallons; (2) new large aboveground storage tanks at existing storage tank facilities; and (3) new aboveground storage tank facilities with an aggregate storage capacity in excess of 21,000 gallons.

The permitting fees established in section 304(c) of the act are waived for storage tanks qualifying for operational permits by rule or general permits. Therefore, for operational permits, no fees will be assessed. It is not anticipated that large numbers of new storage tanks or storage tank facilities requiring site-specific installation permits will be proposed in the near future. Therefore, few tank owners/operators will be required to submit permit fees. The proposed fee structure is designed to allow the Department to recover the reasonable costs associated with permit application reviews.

Permits by Rule

8. *Section 245.211. Scope*

All small aboveground storage tanks systems, except those systems storing highly hazardous substances, and all underground manufactured tank systems storing petroleum qualify for an operational permit by rule. To minimize paperwork, a permit by rule requires no additional information beyond that submitted as part of the annual registration form. Permitting fees are also waived.

9. *Section 245.212. Minimum requirements for obtaining a permit by rule*

This section describes the operational permit requirements for permit by rule storage tanks. To receive and maintain a permit by rule, the owner/operator must annually register the tank; use certified individuals for inspections and tank handling activities; meet applicable technical, administrative and operational requirements; submit a current spill prevention and response plan where required; meet applicable financial requirements; and follow corrective action procedures where necessary. Failure to comply with the these requirements could result in administrative or other Departmental actions to assure compliance.

General Permits

10. *Section 245.221. Scope.*

Storage tank systems not covered by a permit by rule for operation are subject to a general operating permit. Between those facilities receiving a permit by rule or a general operating permit, the full universe of regulated storage tanks in this Commonwealth will receive operating permits, thus eliminating burdensome paperwork for the regulated community. Again, as with permits by rule, the Department proposes to waive the permit fee and to rely upon existing informational requirements as the basis for the permit.

11. *Section 245.222. Application requirements.*

The permitting requirements for a general permit are the same as those for a permit by rule; with the exception that all large aboveground storage tanks must have a current Spill Prevention and Response Plan (SPRP) that

is in conformance with Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904). In both the permit by rule and the general permit, the Department proposes that inspection reports, tank handling forms, SPRPs, registration forms and other routinely required paperwork become part and parcel of the permit. This information will serve to update and renew the permit as it is submitted.

Site-Specific Installation Permits

12. *Section 245.231. Scope.*

This section establishes the classes of proposed new storage tank systems and facilities which must receive site-specific permits prior to installation. Chapter 11 of the act contemplates owners or operators of proposed new aboveground storage facilities in excess of 21,000 gallons, or new storage tanks at existing facilities in excess of 21,000 gallons, receiving a site-specific installation permit prior to construction. In addition, the Department believes it to be in the best interest of the citizens of this Commonwealth to require that newly proposed, highly hazardous substance tanks provide written notification prior to installation so that the potentially affected public has the opportunity to provide comment on the proposal to install a storage tank system.

13. *Section 245.232. General requirements.*

Applicants for a site-specific permit must provide certification that all required administrative, technical and operational requirements specified in Subchapters B, E, F and G will be met. Additionally, a right of entry form, information on siting requirements, an environmental assessment, a current SPRP and proof of public notification are required. This information is consistent with the requirements of Chapter 11 of the act. The permit must be approved by the Department before construction activities commence at the site.

14. *Section 245.233. Mapping requirements.*

Adequate technical review and compliance with siting requirements require the applicant to provide a map identifying certain features within and adjacent to the proposed new facility or the proposed location of the new large aboveground storage tank at an existing facility. The mapping requirements, to be plotted on a map of not less than a 1:400 scale, include the following: boundaries for the proposed facility, location of public roads or proposed monitoring wells, the municipality where the proposed facility is located, elevation and locations of test borings, as well as ownership and location of inactive or abandoned underground mine workings. The applicant must also provide information on surface water, location and ownership of public and private groundwater supplies, slope measurements and the location of any private or public surface water intakes within 20 miles downstream of the proposed site. This information is consistent with that required to prepare an SPRP. The expanded map and location of test borings and monitoring well locations are informational requirements beyond those required in the SPRP but are necessary if the site is to be adequately assessed.

15. *Section 245.234. Siting requirements.*

Section 1102 of the act (35 P. S. § 6021.1102) requires the Department to develop siting regulations for new aboveground facilities. Section 1102 of the act also requires that the Board hold at least one public hearing on the proposed siting requirements. A public hearing has been scheduled, as noted in Section K of this Preamble.

For public health and safety reasons, as well as the other requirements of section 1102 of the act, the Department believes that the public interest and environment can be best protected by requiring applicants for site-specific permits to address the location of wetlands, floodplains, limestone geology and previous underground mining operations. These criteria go directly to section 1102's mandate that the Department consider flooding, water quality, topography, hydrogeology and public health and safety.

Proposed § 245.234(a)(1) would prohibit the placement of new facilities on floodplains. The proposed § 245.234(a)(2) would prohibit the installation of new facilities or new tanks covered by site-specific installation permits in existing wetlands. New proposed facilities or tanks must consider sinkholes, solution tunnels and underground mining to assure stability of the site as well as the ability of the site to contain a spill in the event of a catastrophic release such as the Ashland Oil accident in 1989.

While assuring that new facilities site in safe and environmentally sound locations, the Department recognizes that many existing facilities are located on floodplains. This practice usually is the result of reliance upon barge or tanker transport of regulated petroleum substances. Accordingly, the proposed amendments allow for new large aboveground storage tanks to be constructed where an industrial use already exists on a floodplain.

Finally, the applicant must assure that minerals providing surface support will not be mined as long as the facility stores regulated substances.

The information needed to meet the siting requirements should be readily available. Additional site-specific investigations are proposed to be required where the site has been previously undermined and the applicant needs to develop a stability plan. The additional requirements are not expected to be overly burdensome and are the same kinds of activities performed for any large surface construction project.

16. *Section 245.235. Environmental assessment.*

This section requires the applicant to provide information on several other environmental amenities which are regulated under other State and Federal laws; for example, wild and scenic rivers, threatened or endangered species and special protection watersheds. The facilities and tank systems covered by these installation permits are large enough, or store the substances, as to potentially have a serious impact on these important resources. For the purposes of the assessment, the Department will coordinate any necessary reviews with the appropriate State or Federal agencies and will work with the applicant to minimize or mitigate any identified adverse environmental impacts.

17. *Section 245.236. Public notice.*

In addition to the notification requirements proposed in § 245.232(b)(2), before beginning construction the applicant must give written notice to the local municipality and county, in accordance with section 1101(a) of the act.

Owners proposing to install a new highly hazardous substance storage tank must provide written notice to the local municipality and county prior to installation. This notice is a permitting requirement which must be met prior to construction. Requiring public notice prior to the installation of a storage tank system is not specifically required by the act. The Department believes, however, that it is in the best interest of public health and safety that a notice is served, given the potential toxicity of this

class of regulated hazardous substances. This requirement is also similar to Federal requirements found at 40 CFR Part 370 (relating to hazardous chemical reporting: community right-to-know).

Subchapter E. Technical Standards for Underground Storage Tanks and Facilities.

The purpose of this subchapter is to codify Federal requirements found at 40 CFR Part 280. The proposed Subchapter E establishes general, inspection, underground storage tank system design and construction, general operating, release detection and out-of-service underground storage tank system and closure requirements for storage tank facilities regulated under the act. Part 280 of 40 CFR was previously incorporated by reference, with minor exceptions, at 21 Pa.B. 4345 (September 20, 1991). By codifying the Federal technical standards in Chapter 245, the regulatory requirements will be fully detailed in one document. The Department believes that this will lead to greater clarity and simplicity, assisting the public and the regulated community in understanding the requirements for underground storage tank systems in this Commonwealth.

1. *Section 245.401. Purpose.*

This section states the purpose of Subchapter E, which sets forth the operational and technical requirements for underground storage tanks and underground storage tank facilities.

2. *Section 245.402. Scope.*

This section establishes that this subchapter applies to underground storage tanks regulated under the act and Chapter 245.

3. *Section 245.403. Applicability.*

This section clarifies that this subchapter applies to all owners and operators of underground storage tank systems, as well as installers and inspectors of those systems

4. *Section 245.404. Variances.*

This section establishes a procedure for owners/operators to apply for a variance from the requirements of this proposed subchapter when unique or peculiar circumstances make compliance technically infeasible or unsafe and alternate methods fully protect human health and the environment. Similar procedures and allowances are contained within the individual sections of 40 CFR Part 280 (for example, see 40 CFR 280.21(a)(2)(iv)). The Department believes that having a general section dealing with these alternative methods of meeting the performance standards for underground storage tank systems is preferable for meeting the goals of clarity and ease of understanding.

5. *Section 245.405. Codes and standards.*

This section specifies that underground storage tank systems must comply with applicable industry codes and establishes a mechanism for recognizing additional codes. A list of codes for complying with this subchapter will be available from the Department.

6. *Section 245.411. Inspection frequency.*

This section establishes operations inspection criteria consistent with the act and proposes a phase-in period to begin the operations inspection process at existing underground storage tank facilities.

7. *Sections 245.421 and 245.422. Performance standards for new underground storage tank systems, and upgrading of existing underground storage tank systems.*

These sections codify the current Federal requirements for performance and installation requirements for new underground storage tank systems and the December 22, 1998, upgrade requirements for existing systems. The proposed § 245.422 clarifies that all underground storage tank systems, which do not have corrosion protection, spill and overfill prevention by the December 22, 1998, deadline, shall be closed in accordance with the closure requirements.

8. *Section 245.423. Registration requirements.*

This section specifies the registration requirements for underground storage tanks, including when registration must be amended.

9. *Sections 245.424 and 245.425. Standards for new field constructed tank systems and reuse of removed tanks.*

These sections clarify the technical requirements for new field constructed tank systems and used tanks that will be reused. These sections provide standards for both groups of tanks equivalent to manufactured tank standards contained in 40 CFR 280.20 (relating to performance standards for new UST systems).

10. *Sections 245.431—245.435. Spill and overfill control, operation and maintenance including corrosion protection, compatibility, repairs allowed, and reporting and recordkeeping.*

These sections address the general operating requirements for spill and overfill control, corrosion protection, system compatibility, system repairs, reporting and recordkeeping. These sections are consistent with Federal technical requirements in 40 CFR Part 280. The proposed § 245.434 does go beyond the Federal requirements by requiring the use of certified installers to conduct tank handling activities on underground storage tank systems, in accordance with section 501(c)(2) of the act.

11. *Sections 245.441—245.446. General requirements for all underground storage tank systems, requirements for petroleum underground storage tank systems, requirements for hazardous substance underground storage tank systems, methods of release detection for tanks, methods of release detection for piping and release detection recordkeeping.*

These sections specify the piping and tank release detection requirements for petroleum and hazardous substance systems and release detection recordkeeping requirements. Specific requirements set forth in § 245.444(8) (relating to methods of release detection for tanks) are consistent with EPA proposed recommendations, although specific regulations dealing with SIR do not currently exist in 40 CFR Part 280. The Federal requirements allow other release detection methods provided that the method can effectively detect a release; when conducted properly SIR provides such an option. Proposed § 245.441(a)(3) (relating to general requirements for underground storage tank system) shows SIR in the leak detection table.

The proposed requirements in § 245.441(a)(3)(i) and (ii) comply with the recommendations concerning SIR of the state/Federal workgroup assembled by EPA to consider leak detection issues. The workgroup is comprised of members from seven states, several EPA regions and EPA's Office of Underground Storage Tanks in Washington, D.C. The Department believes that independent evaluation of SIR performance claims and reevaluation when National standards change are necessary to ensure that Pennsylvania's owners/operators receive valid tests results from SIR vendors.

12. *Sections 245.451—245.455. Temporary closure, permanent closure and change-in-service, assessing the site at closure or change-in-service, applicability to previously closed underground storage tank systems, and closure records.*

These sections specify requirements for temporary closure and changes-in-service for a tank system, site assessment requirements, initiating corrective action when contamination is discovered, site assessment requirements of underground storage tank systems closed prior to December 22, 1988, and closure record requirements. Proposed § 245.452(c) specifies replacement of system piping as a closure activity. Although this provision is not explicitly contained in the Federal regulations, the program believes that this provision is consistent with the intent of those regulations, which require measurement of the portions of the underground storage tank site where releases are most likely to be present when closure takes place (40 CFR 280.72(a)). There is also a compelling public interest in assessing sites where piping-only closures take place. In many release situations, it is the piping holding regulated substances that leaks rather than the underground storage tank itself (". . . piping releases occur twice as often as tank releases; . . . When piping systems fail, pressurized systems pose a significant added threat of sudden, large releases.", 53 FR 37088). In the latest report of the Underground Storage Tank Indemnification Fund, over 20% of all claims investigated over the past 2 years involved a release from piping runs. For these reasons, the Department believes that piping-only closures should be conducted in a manner that actively determines whether or not that piping run had a release while it was operating.

Subchapter F. Technical Standards for Aboveground Storage Tanks and Facilities.

This proposed new subchapter is necessary to establish minimum technical standards for aboveground storage tanks under section 301(a) of the act. There are no corresponding comprehensive Federal aboveground storage tank regulations.

The technical and operational standards established by this subchapter and Subchapter G generally must be met by both "operators" and "owners" (as defined by section 103 of the act) of aboveground storage tanks. The Department recognizes that business arrangements may exist where a person might own a storage tank but leases the tank to a separate facility owner or operator. In these arrangements, the tank owner may not have the ability to access the storage tank in a manner necessary to ensure that the Department's technical and operational requirements are met. In cases where a violation of those standards occurs, the Department may take these circumstances into account when considering options to achieve compliance with the standards.

In addition, the Department recognizes that arrangements between tank owners and operators for meeting the Department's technical and operational standards exist. The Department may take these agreements into account as well if violations occur and compliance options are considered.

It is very important to note, however, that the underlying statutory liability remains, in most cases, with the tank owner as well as the tank operator. The Department does not limit its right to enforce the act and the regulations promulgated under the act against any person defined as a responsible party by the act.

1. *Section 245.501. Purpose.*

This section states the purpose of Subchapter F, which is to set forth technical standards and requirements for large aboveground storage tanks regulated under the act.

2. *Section 245.502. Scope.*

This section requires adherence to current industry codes of practice, manufacturer's specifications and sound engineering practices for compliance with the standards and requirements set forth in this proposed subchapter. This section also establishes how this proposed subchapter relates to other regulatory and jurisdictional requirements.

3. *Section 245.503. Variances.*

This section establishes a procedure for owners/operators to apply for a variance or waiver from the requirements of this proposed subchapter when unique or peculiar circumstances make compliance technically infeasible or unsafe and alternate methods fully protect human health and the environment.

4. *Section 245.504. Referenced organizations.*

This section provides a listing of Nationally recognized associations which are referenced throughout this proposed subchapter, and whose codes, standards and practices may be used to comply with the proposed requirements of this subchapter. The Department could have included these specific codes in this proposed rulemaking. However, given the fairly rapid change in technology and the continuing revisions of current industry standards, the Department believes that a technical guidance document offers more flexibility and would allow response to changes more easily than the current rulemaking process.

As noted, the Department maintains a technical manual for installers and inspectors that provides more detailed information and diagrams from industry codes of practice which may be used to satisfy the requirements of this proposed subchapter. The Department intends to expand this manual, update it as necessary and make it available to owner/operators, as well as installers and inspectors, to assist them in determining which codes and practices are applicable to their specific requirements.

5. *Section 245.511. General operations and maintenance.*

This section provides the requirement that storage tank facility owner/operators must establish a formal operations and maintenance program.

6. *Section 245.512. Facility operations and spill response plan.*

This section addresses the requirement to establish a Spill Prevention Response Plan as described in Chapter 9 of the act. The Department has published a technical document which provides detailed guidelines on how to develop and implement the plans.

7. *Section 245.513. Preventive maintenance and housekeeping requirements.*

This section provides for preventive maintenance and housekeeping requirements. It establishes owner/operator routine maintenance inspection procedures which include: daily checks of the facility during routine operations, or electronic surveillance during nonroutine operating hours or for unmanned facilities when product transfers are taking place. This section also proposes monthly maintenance inspection requirements that correlate with current industry practices.

8. *Section 245.514. Security.*

This section provides the requirement that owner/operators are to establish appropriate security measures and procedures. While several key considerations are addressed, specific requirements will vary considerably based on facility design, location, substances stored and fire marshal or local jurisdictional requirements. Therefore, meeting this performance standard in the most efficient manner is a choice left to the owner/operator.

9. *Section 245.515. Labeling/marking of aboveground tank systems.*

This section provides a performance standard for labeling or marking of aboveground storage tank systems and allows for flexibility for owners/operators to develop a suitable means for identifying substance flow and control points when transfer of regulated substance is taking place. Facilities with existing methods that comply with current industry practices and jurisdictional requirements should satisfy requirements of this proposed subchapter.

10. *Section 245.516. Recordkeeping requirements.*

This section establishes recordkeeping requirements, identifies specific documentation to be retained and the proposed retention periods.

11. *Section 245.521. Performance standards for aboveground storage tanks.*

This section outlines performance requirements and identifies specific sections of the design, construction and installation portion of this subchapter which must be adhered to in order to comply with performance requirements.

12. *Section 245.522. New aboveground tank installations and reconstructions.*

This section provides the requirements for design, construction, reconstruction, relocation and the associated testing and inspection of aboveground storage tanks according to current industry codes of practice and manufacturer's specifications. Field constructed storage tanks and reconstructed storage tanks must be hydrostatically tested (following American Petroleum Institute recommendations) unless other suitable testing methods are approved by the Department.

13. *Section 245.523. Aboveground storage tanks in underground vaults.*

This section provides requirements for installing aboveground storage tanks in underground vaults. These requirements are consistent with State Fire Marshal requirements at 37 Pa. Code Chapter 14 (relating to vaults for the storage of flammable and combustible liquids—statement of policy).

14. *Section 245.524. Aboveground tank modifications.*

This section provides requirements for modifying existing aboveground storage tanks and the associated testing and inspection of the completed modification. These requirements follow current industry standards and manufacturer's specifications.

15. *Section 245.525. Ancillary equipment for aboveground storage tanks.*

This section addresses design, installation and maintenance requirements for ancillary equipment, including vents and control valves.

16. *Section 245.526. Piping for aboveground storage tanks.*

This section provides design, construction and testing requirements for new and replacement piping and provides testing and upgrading requirements for existing piping. Piping that currently does not meet these standards shall be tested for tightness annually, beginning within 3 years after this proposal becomes final.

17. *Sections 245.531—245.533. Corrosion and deterioration prevention.*

These sections provide requirements for general corrosion and deterioration prevention and cathodic protection systems.

18. *Section 245.534. Interior linings and coatings.*

This section provides requirements for coating or lining systems used to protect tank interiors and tank bottoms from corrosion. These requirements are consistent with current industry practices.

19. *Sections 245.541—245.543. Release prevention and leak detection.*

These sections establish requirements for overfill prevention, emergency containment, secondary containment and leak detection. Proposed containment permeability standards are consistent with Department technical guidance and current industry practice. Usage of the term "emergency containment" is consistent with the new definition in the proposed amendment to Subchapter A contained in this rulemaking package. This definition correlates with industry use of the term "secondary containment." "Secondary containment" is currently defined by section 103 the act, however, and the Department is bound by that definition.

Phase-in periods are established for existing tank systems. Double walled tanks, double bottom tanks, dikes, berms, retaining walls, vaults, curbing, retention basins, holding tanks, sumps and other containment structures of sufficient impermeability may be used to achieve compliance with containment requirements.

20. *Sections 245.551—245.554. Aboveground storage tank inspections.*

These sections establish inspection criteria consistent with the requirements of section 301(a)(2) and (c) of the act and § 245.21 (relating to tank handling and inspection requirements). Department certified third-party inspectors must be used to inspect storage tank installation and major modification activities and to perform in-service inspection and out-of-service inspection of storage tank systems at specific intervals. These intervals are based on corrosion rates determined in a manner that is consistent with current industry practices. Phase-in periods are proposed for beginning in-service inspections and out-of-service inspections at existing storage tank facilities.

21. *Sections 245.561 and 245.562. Closure and removal from service requirements.*

These sections provide procedures for permanent closure (removal and decommissioning) of storage tank systems, procedures for change-in-service to an unregulated substance or unregulated use and procedures for temporary removal from service of storage tank systems. The proposals would allow storage tank systems to be temporarily taken out-of-service for up to 5 years; however, corrosion and deterioration requirements, leak detection requirements, maintenance requirements and inspection requirements must be adhered to during the temporary out-of-service period.

Subchapter G. Simplified Program for Small Aboveground Storage Tanks.

This proposed new subchapter is necessary to establish minimum requirements to regulate small aboveground storage tanks under section 301(d) of the act. There are no corresponding Federal regulations for small aboveground storage tanks.

1. *Section 245.601. Purpose.*

This section states the purpose of Subchapter G, which is to set forth technical standards and requirements for small aboveground storage tanks having a capacity equal to or less than 21,000 gallons and regulated under the act.

2. *Section 245.602. Scope.*

This section establishes the Department's intent to apply current industry codes of practice, manufacturer's specifications and sound engineering practices for compliance with the performance standards and requirements set forth in this proposed subchapter. Adherence to manufacturer's specifications is especially important for this class of storage tanks, as small aboveground storage tanks are almost exclusively shop-built tanks. This section also establishes how this proposed subchapter relates to other regulatory and jurisdictional requirements.

3. *Section 245.603. General storage tank facility requirements.*

This section provides that owner/operators of facilities, with an aggregate storage capacity greater than 21,000 gallons, must establish a Spill Prevention Response Plan as described in Chapter 9 of the act. The Department has published a technical document which provides detailed guidance on how to develop and implement the plans.

This section also provides that owner/operators are to establish appropriate security measures and procedures. Several key considerations are addressed. Specific requirements at each site will vary considerably based on facility design, location, substances stored, fire marshal requirements and local jurisdictions.

4. *Section 245.604. Referenced organizations.*

This section provides a listing of Nationally recognized associations which are referenced throughout this proposed subchapter, and whose codes, standards and practices may be used to comply with the proposed requirements of this subchapter. The Department could have included these specific codes in this rulemaking. However, given the fairly rapid change in technology and the continuing revisions of current industry standards, the Department believes that a technical guidance document offers more flexibility and would allow response to changes more easily than the current rulemaking process.

As noted, the Department maintains a technical manual for installers and inspectors that provides more detailed information and diagrams from industry codes of practice which may be used to satisfy the requirements of this proposed subchapter. The Department intends to expand this manual, update it as necessary and make it available to owner/operators, as well as installers and inspectors, to assist them in determining which codes and practices are applicable to their specific requirements.

5. *Section 245.611. Testing requirements for new and substantially modified small aboveground storage tanks.*

This section provides requirements for testing new storage tanks at installation and for testing existing storage tanks that receive major modifications to the tank shell or the tank bottom. Testing must be consistent with a current industry code of practice and manufacturer's specifications.

6. *Section 245.612. Performance and design standards.*

This section provides performance standards for the design and construction of new storage tank systems and modification or upgrading of existing storage tank systems, or both. These proposed standards are consistent with current industry standards, manufacturer's specifications and sound engineering practices. This section refers to the standards in Subchapter F for tanks installed in underground vaults and used for dispensing Class I and Class II motor fuels (see discussion of § 245.523) and for tanks which are internally lined (see discussion of § 245.534).

This section also establishes requirements for secondary containment in, around or under tanks to provide monitoring capability to meet leak detection requirements. In most situations, stationary foundations for horizontal and saddle mounted tanks will satisfy this requirement. Emergency containment requirements are also addressed. Emergency containment is required to contain releases from overfills, leaks and spills and may also suffice as secondary containment for monitoring and leak detection requirements. Emergency containment must be sufficiently impermeable to contain any potential release until the release can be detected and expeditiously removed.

A variety of containment structures may be used to satisfy secondary containment and emergency containment performance standards. These include double walled tanks, double walled piping, double bottom tanks, dikes, berms, retaining walls, vaults, curbing, retention basins, holding tanks, sumps and other containment structures of sufficient impermeability. In the case of tanks, the containment structure must also have sufficient capacity to retain 110% of the capacity of the largest tank in the containment area.

7. *Section 245.613. Monitoring standards.*

This section establishes performance standards for leak detection and owner/operator maintenance procedures. Any appropriate form of leak detection, including visual examination, may be used to satisfy leak detection requirements. Maintenance and general operations must be checked at least once a month. The Department will provide a sample monthly maintenance checklist in the updated technical manual, which may be used by owner/operators to satisfy the requirement of documenting monthly maintenance checks. Owners may establish written agreements with operators or with a third-party to conduct and record monthly maintenance checks.

8. *Section 245.614. Requirements for closure.*

This section provides for closure (removal or decommissioning) of existing storage tanks. Owners/operators must document closures or changes in the service status of each tank, or both, on the Tank Registration Form provided by the Department. Documentation shall be provided to the Department within 30 days after completing a permanent closure or change in service status of a small aboveground storage tank, or both. Until the Department receives notification that a tank is temporarily removed from service, a tank is considered to be in-service and must comply with all regulatory requirements.

9. *Section 245.615. Recordkeeping requirements.*

This section establishes recordkeeping requirements, identifies specific documents to be retained and the proposed retention periods.

10. *Section 245.616. Inspection requirements.*

This section establishes inspection criteria consistent with the requirements of section 301(a)(2) and (c) of the act and § 245.21. Department certified third-party inspectors must be used to perform in-service inspections of small aboveground storage tank systems at specific intervals as well as inspecting the installation, reconstruction, relocation and major modification activities performed on all field constructed storage tanks. Because almost all small aboveground storage tanks are shop-built, this latter requirement is not expected to have much impact on owners/operators of these storage tanks. Phase-in periods are proposed to begin in-service inspections at existing storage tank facilities.

F. *Benefits and Costs*

Executive Order 1996-1 requires a statement of the benefits of a proposal, as well as the costs which may be imposed for the Commonwealth, local government, the private sector and the general public. It also requires a statement of the need for, and a description of, any forms, reports or other paperwork required as a result of the proposal. Because four separate proposed subchapters are included in this rulemaking package, they will be addressed individually in each category.

Benefits

Subchapter A: By adopting the Federal Lender Liability rule by reference, the Department will have regulations in place that provide clear protection to lending institutions who hold a financial interest in underground storage tanks. This rule clearly defines what represents a financial versus control interest for lending institutions. It compliments Act 3 of 1995 and works in concert with the goals of Act 2 of 1995. Through this rule, lending institutions should be more willing to take possession of forfeited underground storage tank sites, loan money for upgrades and invest in the development of new sites.

Subchapter C: Given the size of the regulated universe of underground and aboveground tanks in this Commonwealth, a "traditional" permitting program for the operation or installation of tanks could never succeed, as processing so many forms in a timely manner would be extremely cumbersome. Therefore, this subchapter focuses only on those storage tanks determined by the General Assembly to be of the most concern from a permitting perspective—the installation of aboveground storage tanks with greater than 21,000 gallons capacity at a new or existing facility. These storage tanks can be quite large, going into millions of gallons of capacity. If designed correctly and placed in a safe location, they can also be quite safe. The focus of this subchapter is to ensure that these tasks are carried out properly.

Subchapter E: This subchapter primarily codifies existing regulations, so new benefits as a result will be limited. The major benefit of taking this action is that all regulations for underground storage tanks will be contained in one place, allowing owners and operators to understand what is required without having to turn to 40 CFR Part 280.

There are smaller benefits to this part of the package as well. With the promulgation of SIR regulations, owners and operators who use these methods to meet release detection requirements will be assured that they are receiving valid results. Underground tank owners/operators are also put on notice that use of a coax vapor recovery system will nullify overfill protection provided by flow vent valves, thereby reducing money wasted on equipment that will not meet the established performance standards. Finally, many issues that were left unclear by 40 CFR Part 280 (for example, when a removed underground storage tank can be reused) are answered by this proposed subchapter, eliminating confusion.

Subchapters F and G: With the promulgation of these subchapters, the Commonwealth will finally have a comprehensive regulatory program for aboveground storage tanks. These subchapters are designed to reduce the likelihood of the Commonwealth seeing another release of the magnitude that occurred in Ashland Oil's 1989 tank collapse. By relying on industry standards as the basis for performance standards in the various areas of aboveground storage tank installation, operation and closure, these regulations reward those who have been following the industry-set rules and requires persons who are operating below those standards to catch up. Aboveground storage tanks generally do not pose the same release hazards as underground tanks (as one can see most releases rather readily) but do represent a greater catastrophic hazard. These subchapters represent an attempt to eliminate or reduce both the slow release hazard (due, for example, to a lack of corrosion prevention) as well as the catastrophic hazards.

Compliance Costs

Subchapter C: In general, the Department has attempted to minimize costs in the permitting area by requiring little or no new information for operating permits by rule or general permits and by waiving the statutory permit fees for operating permits. Costs will be incurred with the site-specific installation permits required by Chapter 11 of the act. The Department is proposing permit fees which would enable the Department to recover the reasonable expenses associated with reviewing these applications. As for the information that must be included in such a permit application, the Department has attempted to limit its requirements. The information requested under this proposal is either readily available, or is the sort of information that normally should be compiled when a large construction project is being proposed.

Subchapter E: The Department does not anticipate any new compliance costs associated with this subchapter, as almost all of the requirements already exist in current law. The Department does establish a schedule for the inspection of underground storage tank facilities by certified inspectors. At the present time, the Department is requiring these inspections for a limited segment of the underground storage tank universe. Because tank owners/operators must pay for these third-party inspections, the establishment of a schedule may lead to these costs being incurred sooner than they would be without a formal schedule. The inspection requirement itself is not, however, a new obligation.

Vendors of statistical inventory reconciliation test methods must have their method's performance claims verified by an independent third-party using leak rates that are unknown to the tester. While this will involve some expense for the vendors, the underground storage tank owner/operator who is relying on the method for release detection will have the assurance that the SIR system they have chosen will work.

Finally, the Department is proposing that owners/operators who close only the piping part of an under-

ground storage tank system prepare a closure report describing that action. Because the closure report includes a site assessment, this will involve soil sampling and corrective action if contamination above action levels is discovered. Although sampling in piping runs will be fairly limited, it will still involve some additional expense. It is difficult to say exactly how much more this will cost because the sampling protocol for closure is fairly site-specific. It has been unclear up to this time if such a reporting requirement is a part of the Federal underground storage tank program.

Subchapters F and G: These two subchapters represent the creation of a comprehensive program to regulate aboveground storage of regulated substances. For the most part, however, an owner/operator of an aboveground storage tank who has been following the State Fire Marshal's requirements (37 Pa. Code Part I, Subpart B (relating to flammable and combustible liquids) and recommended industry codes of practice should not notice any overwhelming changes as a result of this rulemaking. In general, the Department tried to follow industry standards when establishing these aboveground storage tank standards of performance.

The two new programs established by this proposed rulemaking package are permitting and aboveground tank regulations. Generally, the addition of new responsibilities would lead to increased costs to the Commonwealth for running the program. As noted in Section D of the Preamble, the Department expects these new permitting and aboveground storage tank regulations to become effective around the same time that the underground storage tank program begins to quiet down. In addition, many of the requirements in the aboveground tank regulations have phase-in periods measured in years, so the workload should not be overwhelming right at the start. It is believed, therefore, that it will be possible to shift resources and time currently being spent in the underground program to focus on implementation of the aboveground regulations. Finally, the Department does not anticipate new resource expenditures as a result of Subchapter E.

Compliance Assistance Plan

As of this time, there is only a small amount of public financial assistance available to owners and operators of storage tanks. The Storage Tank Loan Fund, managed by the Department of Commerce, has low-interest loans available. To qualify, the act requires that a tank owner or operator be potentially liable for corrective action, which means that these loans are not available to the average tank owner or operator. By addressing lender liability in this proposed rulemaking, the Department hopes that more private funding sources will develop to assist owners and operators in meeting the costs of compliance.

As for technical and educational assistance, the Department currently operates a fairly extensive program of outreach activities designed to assist owners and operators of storage tanks as well as certified individuals. This program includes the *Storage Tank Monitor*, a quarterly newsletter; a series of detailed factsheets that focus on single issues in the storage tank program (for example, release reporting); seminars featuring a Nationally-recognized storage tank technology expert (to date, leak detection training and closure training); and training sessions presented by regional and central office training teams on a variety of issues. It also includes guidance documents on preparing Spill Prevention Response Plans (SPRPs) and correct closure procedures. The Department also presents general program seminars jointly with the regulated community and consultation with STAC on regulation and policy development.

The Department expects these efforts to continue and be intensified, especially as EPA's 1998 upgrade deadline approaches. In addition, new efforts will be made to educate the regulated community about those requirements that will appear in Pennsylvania regulations for the first time. Aboveground storage tank requirements will be covered in much greater detail in outreach activities after these amendments become effective. As noted in Section E of this Preamble, technical guidance manuals will be prepared for both the underground and aboveground storage tank programs outlining what industry codes of practice may be followed to meet the performance standards contained in these proposed amendments.

Paperwork Requirements

Subchapter C: By covering the operation of storage tanks by either permits by rule or general permits, the Department has attempted to limit the paperwork required under this subchapter. When application for a site-specific installation permit is required by Chapter 11 of the act, however, a full permit application will need to be submitted. The information in the application is limited to that which is necessary for the Department to make an informed decision on the application. In addition, the Department believes that much of the information required by this subchapter will be readily available to owners/operators. Finally, when coordination with other State or Federal agencies is necessary, the Department will take the lead in ensuring that the information is available and coordinating the necessary reviews.

Subchapter E: Because the requirements of Subchapter E are already in effect in this Commonwealth under § 245.2, few new paperwork requirements are contained in this subchapter. In fact, the proposal at § 245.455 (relating to closure records) will actually reduce current reporting requirements, as closure reports for underground storage tanks will no longer have to be submitted to the Department (although closure reports still must be completed).

One new paperwork requirement is found in proposed § 245.452(c) (relating to permanent closure and changes-in-service), which requires a closure report to be completed when only the piping run of an underground storage tank system is closed. Under the Federal underground storage tank regulations, it is unclear what is required in the way of a closure report when only the piping of an underground storage tank system is replaced. Because of persistent problems with leaking piping, however, the Department believes that assessment of the piping areas when piping is closed is appropriate.

Subchapter F: Because Subchapter F is proposed to be added as a comprehensive regulatory program for aboveground storage tanks, almost all of the paperwork requirements are new. Currently, the only forms required to be filed are storage tank registration forms and tank handling activity and inspection report forms. The Department has attempted to minimize the need for new forms and limit the use of new forms to those areas where forms and recordkeeping are absolutely necessary. Proposed § 245.516 (relating to recordkeeping requirements) outlines the recordkeeping and reporting requirements under this subchapter. Paperwork not required under the existing aboveground storage tank program

includes: leak detection records, cathodic protection monitoring results, monthly maintenance inspection records and closure reports.

Subchapter G: Subchapter G represents the addition of a simplified yet comprehensive regulatory program for small aboveground storage tanks. As a result, there will be new paperwork required from owners/operators of these tanks. Because this subchapter represents a simplified program, the Department has attempted to reduce paperwork on these aboveground storage tanks to the bare-essential minimum.

Proposed § 245.615 (relating to recordkeeping requirements) outlines the recordkeeping and reporting requirements for this subchapter. Generally, the Department has tried to limit the paperwork required to those records that should otherwise be kept as a sound business practice. An example would be the original tank and system installation record and design specifications. In addition, the Department is not requiring the submission of these records to the Department in most instances. It is enough that the owner/operator maintains the records at the facility site. Finally, closure reports are not required for this class of storage tanks. Only an amended registration form need be submitted (although, if a reportable release is confirmed during closure, it must be reported).

G. *Pollution Prevention*

Generally speaking, the term "pollution prevention" refers to the minimization of the wastes generated in a commercial process by altering that process. The storage tank program has a slightly different approach. The goal is to keep substances that are harmful to the public and the environment from being released at all. The programs set out in this proposed rulemaking package are designed to halt the release and spread of regulated substances from storage tanks located in this Commonwealth. They create a cradle-to-grave program with the goal of making sure that the storage tank is installed, maintained, operated, closed and removed in a manner that will minimize the likelihood of a release occurring. If a release does occur, these amendments and the regulations that currently exist in Chapter 245 are designed to detect the release quickly, contain it if possible, and make sure that corrective action is carried out expeditiously, minimizing exposure to the public and the environment.

In this proposed package, the Department is attempting to reach these goals through a combination of performance standards, with built-in flexibility (including the possibility of a variance) as to how the regulated community achieves the goals, and reliance on industry standards. By taking this approach, the Department hopes to reduce pollution, lower the number of corrective actions that must eventually be commenced, decrease the amounts of contaminated soil and groundwater that must be dealt with and do so in a manner that is flexible and reasonable.

H. *Sunset Review*

These regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), the Department submitted a copy of the proposed rulemaking on June 11, 1996, to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the Senate and House Environmental Resources and Energy Committees. In addition to submitting the proposed amendments, the Department has provided IRRC and the Committees with a copy of a detailed regulatory analysis form prepared by the Department. A copy of this material is available to the public upon request.

If IRRC has objections to any portion of the proposed amendments, it will notify the Department within 30 days of the close of the public comment period. The notification shall specify the regulatory review criteria which have not been met by that portion. The Regulatory Review Act specifies detailed procedures for review by the Department, the Governor and the General Assembly before final publication of the regulations.

J. *Public Comments*

Written Comments—Interested persons are invited to submit comments, suggestions or objections regarding the proposal to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 15th Floor, 400 Market Street Harrisburg, PA 17105-2301). Comments received by facsimile will not be accepted. Comments, suggestions or objections must be received by August 28, 1996. Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by August 28, 1996. The one-page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final regulations will be considered.

Electronic Comments—Comments may be submitted electronically to the Board at RegComments@A1.dep.state.pa.us. A subject heading of the proposal must be included in each transmission. Comments submitted electronically must also be received by the Board by August 28, 1996.

K. *Public Hearings*

The Board will hold one public hearing for the purpose of accepting comments on this proposal. The hearing will be held at 1 p.m. on August 7, 1996, in the 1st Floor Meeting Room, Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA.

Persons wishing to present testimony at the hearing are requested to contact Sharon Freeman at the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526, at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at the hearing.

Persons with a disability who wish to attend the hearing and require an auxiliary aid, service or other accommodation in order to participate should contact Sharon Freeman at (717) 787-4526, or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) to discuss how the Department may accommodate their needs.

JAMES M. SEIF,
Chairperson

(*Editor's Note*: A proposal to amend §§ 245.1 and 245.2, proposed to be amended in this document, remains outstanding at 25 Pa.B. 5053 (November 16, 1995). In

addition, Act 34 of 1996 (P. L. 171) was enacted on May 10, 1996, the changes made to the act by Act 34 are, therefore, not reflected in this proposed rulemaking.)

Fiscal Note: 7-296. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart D. ENVIRONMENTAL HEALTH AND SAFETY

ARTICLE VI. GENERAL HEALTH AND SAFETY

CHAPTER 245. ADMINISTRATION OF THE STORAGE TANK AND SPILL PREVENTION PROGRAM

Subchapter A. GENERAL PROVISIONS

GENERAL

§ 245.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Aboveground storage tank—One or a combination of stationary tanks with a capacity in excess of 250 gallons, including underground pipes and dispensing systems connected thereto within the storage tank facility, which is or was used to contain an accumulation of regulated substances, and the volume of which, including the volume of piping within the storage tank facility, is greater than 90% above the surface of the ground. The term includes tanks which can be visually inspected, from the exterior, in an underground area. The term does not include the following, or pipes connected thereto:

* * * * *

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

(xviii) A tank that contains a de minimis concentration of regulated substances.

(xix) An emergency spill or overflow containment tank that is expeditiously emptied after use.

[(xv)] (xx) ***

* * * * *

***Beneath the surface of the ground*—Beneath the ground surface or otherwise covered with earthen materials.**

* * * * *

***CERCLA*—The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C.A. §§ 9601—9675).**

* * * * *

***Cathodic protection tester*—A person who can demonstrate an understanding of the principles and measurements of common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, the person 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.**

* * * * *

***Coax vapor recovery*—The use of a coaxial fitting to provide Stage I vapor recovery; one orifice for the conveyance of the product to the tank and a second, concentric orifice for venting the tank to the delivery vehicle.**

***Combination of tanks*—Tanks connected together at a manifold in a manner that they act as a single unit; tank capacity for a combination of tanks is the sum of the individual tank capacities.**

* * * * *

***Compatible*—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 tank system.**

***Connected piping*—All 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 tank system, the piping that joins two regulated systems should be allocated equally between them.**

***Consumptive use*—The term means, with respect to heating oil, that which is consumed on the premises.**

* * * * *

***Corrosion expert*—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. The person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.**

***Corrosion protection*—The protection of metal from deterioration. The deterioration may be due to a natural electrochemical reaction between the metal and the soil or other electrolyte, or because of stray direct currents.**

***De minimis*—With regard to products containing regulated substances, the term applies when the regulated substance is of insufficient concentration to be required to appear on a Material Safety Data Sheet (MSDS). The term does not apply to section 507 of the act (35 P. S. § 6021.507) as it pertains to site contamination.**

***Dielectric material*—A material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate tank systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the tank system—for example, tank from piping.**

***Electrical equipment*—Equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.**

Emergency containment—A containment structure which serves to convey, capture and contain the total volume of an anticipated release of regulated substance from an aboveground or underground storage tank system and which is expeditiously emptied.

* * * * *

Excavation zone—The volume containing the tank system and backfill material bounded by the ground surface, walls and floor of the pit and trenches into which the underground storage tank system is placed at the time of installation.

Existing underground storage tank system—An underground storage 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 following apply:

(i) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction of the site or installation of the tank system.

(ii) One of the following apply:

(A) A continuous onsite physical construction or installation program has begun.

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

* * * * *

Gathering lines—A pipeline, equipment, facility or building used in the transportation of oil or gas during oil or gas production or gathering operations.

* * * * *

Hazardous substance storage tank system—A storage tank system that contains a hazardous substance defined in section 101(14) of CERCLA (42 U.S.C.A. § 101(14)), but not including a substance regulated as a hazardous waste under Subtitle C of CERCLA, or mixture of the substances and petroleum, and which is not a petroleum system.

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

Highly hazardous substance tank—A storage tank of greater than 1,100 gallons capacity which contains reportable quantities of substances with CERCLA reportable release quantity of 10 pounds or less, as identified by 40 CFR Part 302 (relating to designation, reportable quantities, and notification).

Hydraulic lift tank—A tank holding hydraulic fluid for a closed loop mechanical system that used compressed air or hydraulic fluid to operate lifts, elevators and other similar devices.

* * * * *

Large aboveground storage tank facility—An aboveground storage tank facility with greater than 21,000 gallons total aboveground storage capacity.

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

* * * * *

Motor fuel—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 an internal combustion engine.

* * * * *

New underground storage tank system—An underground storage tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See the definition of "existing underground storage tank system.")

Noncommercial purposes—The term means, with respect to motor fuel, motor fuel not for resale.

* * * * *

On the premises where stored—With respect to heating oil, the term means tank systems located on the same property where the stored heating oil is used.

Operational life—The period beginning when installation of the tank system has commenced until the time the tank system is properly closed.

* * * * *

Overfill—A release that occurs when a tank is filled beyond its capacity.

* * * * *

Petroleum system—A storage tank system that primarily contains petroleum, and may contain additives or other regulated substances. The term includes systems containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils.

Pipe or *piping*—A hollow cylinder or tubular conduit that is constructed of nonearthen materials. The terms include the associated fittings such as unions, elbows, tees and flexible joints.

Pipeline facilities (including gathering lines)—New and existing pipe rights-of-way and associated equipment, facilities or buildings.

* * * * *

Reconstruction—The work necessary to reassemble a storage tank that has been dismantled and relocated to a new site.

* * * * *

Removal from service—The term includes the following:

(i) Activities related to rendering **[a] an underground** storage tank system permanently unserviceable.

Activities include **[properly] the oversight of the proper** draining and cleaning **of** the storage tank system of product liquids, vapors, accumulated sludges or solids, and completing one of the following:

* * * * *

(ii) **[The term includes discontinued] Discontinued** use, abandonment, closure in place and permanent closure but does not include temporary closure as those terms are used in the act **[and the Federal regulations promulgated under the Resource Conservation and Recovery Act of 1976].**

(iii) **[The term includes site] Site** assessment activities required under **[40 CFR Part 280 (relating to technical standards and corrective action requirements for owners and operators of underground storage tanks)] Subchapter E (relating to technical standards for underground storage tanks)** and applicable State law, which are the responsibility of owners and operators, but are not conducted by certified installers or inspectors.

* * * * *

***Residential tank*—A tank located on property used primarily for dwelling purposes.**

* * * * *

***SARA*—The Superfund Amendments and Reauthorization Act of 1986, the act of October 17, 1986 (Pub.L. No. 99-499, 101 Stat. 1613).**

* * * * *

***Septic tank*—A watertight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer.**

Stormwater or ***wastewater collection system*—Piping, pumps, conduits and other equipment necessary to collect and transport the flow of surface water runoff resulting from precipitation or domestic, commercial or industrial wastewater to and from retention areas or the areas where treatment is designated to occur. The collection of stormwater and wastewater does not include treatment except where incidental to conveyance.**

* * * * *

***Surface impoundment*—A natural topographic depression, manmade excavation or diked area formed primarily of earthen materials, although it may be lined with man-made materials, that is not an injection well.**

* * * * *

***Tank*—A stationary device designed to contain an accumulation of regulated substances and constructed of nonearthen materials—for example, concrete, steel or plastic—that provide structural support.**

* * * * *

***Underground area*—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 storage tank—One or a combination of tanks (including underground pipes connected thereto) which are used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10% or more beneath the surface of the ground. The term does not include:

* * * * *

(ii) Tanks **[of 3,000 gallons or less]** used for storing heating oil for consumptive use on the premises where stored.

* * * * *

(xiii) Tanks containing radioactive materials or coolants that are regulated under The Atomic Energy Act of 1954.

(xiv) A wastewater treatment tank system.

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

(xvi) An underground storage tank system that contains a de minimis concentration of regulated substances.

(xvii) An emergency spill or overflow containment underground storage tank system that is expeditiously emptied after use.

(xviii) An underground storage tank system containing radioactive material that is regulated under The Atomic Energy Act of 1954 (42 U.S.C.A. §§ 2011—2297).

(ix) An underground storage tank system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR Part 50, Appendix A (relating to general design criteria for nuclear power plants).

[(xiii)] (xx) ***

* * * * *

***Upgrade*—The addition or retrofit of some systems such as cathodic protection, lining or spill and overfill controls to improve the ability of a storage tank system to prevent the release of product.**

* * * * *

***Underground storage tank system*—An underground storage tank, connected piping and ancillary equipment or containment system.**

* * * * *

***Wastewater treatment tank*—A tank that is designed to receive and treat an influent wastewater through physical, chemical or biological methods.**

* * * * *

§ 245.2. General.

(a) A person may not install, construct, erect, modify, operate or remove from service all or part of a storage tank system or storage tank facility in a manner that violates the act, this part or applicable Federal regulations adopted under the Resource Conservation and Recovery Act of 1976 (42 U.S.C.A. §§ 6901—6987). **[This chapter incorporates by reference the Federal regulations governing underground storage tank systems contained in 40 CFR Part 280 (relating to technical standards and corrective action require-**

ments for owners and operators of underground storage tanks (UST)), except for Federal regulations governing the exclusions and deferrals for underground storage tank systems contained in 40 CFR 280.10(b)—(d) (relating to applicability).] This chapter incorporates by reference the Federal regulations in 40 CFR Part 280, Subpart I (relating to lender liability).

(b) Whenever industry codes are specified in this chapter, the latest edition shall be used. When industry codes are updated, facilities installed to previously existing standards prior to the update will not automatically be required to be upgraded to meet the new standard.

(c) A person may not install a storage tank system regulated under the act unless the system does the following:

(1) Will prevent releases due to corrosion of structural failure for the operational life of the system.

(2) Is protected against corrosion and designed in a manner to prevent the release or threatened release of any stored substance.

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

(*Editor's Note*: Subchapter C is new. It has been printed in regular type to enhance readibility.)

Subchapter C. PERMITTING OF UNDERGROUND AND ABOVEGROUND STORAGE TANK SYSTEMS AND FACILITIES

GENERAL

Sec.
245.201. Scope.
245.202. Public records and confidential information.
245.203. General requirements for permits.
245.204. Form of application.
245.205. Right of entry.
245.206. Verification of application.
245.207. Permit application fee.

PERMITS BY RULE

245.211. Scope.
245.212. Minimum requirements for obtaining a permit by rule.

GENERAL OPERATING PERMITS

245.221. Scope.
245.222. Application requirements.

SITE SPECIFIC INSTALLATION PERMITS

245.231. Scope.
245.232. General requirements.
245.233. Mapping requirements.
245.234. Siting requirements.
245.235. Environmental assessment.
245.236. Public notice.
245.237. Public hearings.

GENERAL

§ 245.201. Scope.

This subchapter specifies procedures and rules for the permitting of aboveground and underground storage tank systems and facilities.

§ 245.202. Public records and confidential information.

(a) Except as provided in subsection (b), records, reports or other information submitted to the Department under this subchapter shall be made available to the public for inspection or copying during regular business hours.

(b) The Department may, upon request, designate records, reports or other information as confidential when the person providing the information demonstrates the following:

(1) The information contains trade secret processes, operations, style of work or apparatus of a person or is otherwise confidential business information.

(2) The information is not emission, discharge or testing data or other information that relates to public health, safety, welfare or the environment.

(c) When submitting information under this subchapter, a person shall designate the information which the person believes is confidential or shall submit that information separately from other information being submitted.

(d) Information which the Department determines to be confidential under this section will not be made available to the public.

(e) This section does not prevent the disclosure of information submitted to the Department as part of a general or site specific permit application which meets one of the following:

(1) The Department is required to make the information available to the public as part of the permit application information.

(2) The Department determines that it is necessary to disclose the information during any comment period necessary to obtain informed public comment on the permit application.

§ 245.203. General requirements for permits.

(a) Except as provided in subsections (b)—(d), a person may not operate an aboveground or underground storage tank system or storage tank facility, or install a storage tank system or facility covered by § 245.231 (relating to scope), unless the person has first applied for and obtained a permit for the activity from the Department under this subchapter.

(b) A person is not required to submit an application for a permit if the storage tank system is subject to a permit by rule, if the person maintains and operates the storage tank system in compliance with the standards and requirements of the Department under the act and this chapter. Failure to comply with standards could result in administrative or other Departmental actions against the storage tank owner/operator.

(c) A person may continue to operate an existing storage tank system for its intended use until the Department notifies the person to submit a permit application under this subchapter, if the person maintains and operates the storage tank system in compliance with the act and this chapter.

(d) Operation of existing storage tank systems will be allowed to continue until the Department takes final action on the permit application requested in subsection (c).

(e) New storage tank systems shall obtain a permit from the Department under this subchapter prior to accepting a regulated substance.

(f) Permits will be renewed on an annual basis concurrent with registration.

§ 245.204. Form of application.

(a) Applications for a permit under this subchapter shall be submitted to the Department in writing, on forms provided by the Department.

(b) The information in the application shall be current, presented concisely and supported by appropriate references to technical and other written material available to the Department.

§ 245.205. Right of entry.

(a) Each application shall contain, upon a form prepared and furnished by the Department, the irrevocable written consent of the landowner to the Commonwealth and its authorized agents to enter the permit area. The consent will be applicable prior to the initiation of operations, for the duration of the operation of the storage tank system or facility and until the facility is closed under this subchapter, for the purpose of inspection and monitoring, maintenance or abatement measures deemed necessary by the Department to carry out the purposes of the act.

(b) For those facilities deemed permitted by permit by rule, the permittee, as a condition of the permit, agrees to right of entry described in subsection (a). Failure to allow the Department or its authorized agents entry is considered unlawful conduct and may result in permit suspension, revocation or other enforcement action.

§ 245.206. Verification of application.

An application for a general or site specific permit shall be verified by a responsible official of the applicant with a statement that the information contained in the application is true and correct to the best of the official's information and belief.

§ 245.207. Permit application fee.

Each application for a site specific installation permit will be accompanied by a nonrefundable fee in the form of a check payable to the "Commonwealth of Pennsylvania" as follows:

(1) Permit applications for highly hazardous substance tank: $100.

(2) Permit applications for new large aboveground storage tanks at existing facilities: $250 plus administrative review costs in excess of the $250 fee.

(3) Permit applications for a new large aboveground facility: $500 plus administrative review costs in excess of the $500 fee.

PERMITS BY RULE

§ 245.211. Scope.

The following storage tank systems are subject to permit by rule for operation:

(1) Aboveground storage tank systems with a capacity less than or equal to 21,000 gallons, except highly hazardous substance storage tank systems.

(2) Underground manufactured storage tank systems storing petroleum.

§ 245.212. Minimum requirements for obtaining a permit by rule.

(a) A storage tank system listed in § 245.211 (relating to scope) shall be deemed to have a permit by rule for operation if the following conditions are met:

(1) The storage tank system is properly registered, including payment of registration fees if necessary.

(2) Tank handling and inspection activities are performed by Department certified individuals, as specified in Subchapter B (relating to certification program for owners and operators of storage tanks and storage tank facilities).

(3) If necessary, the corrective action process regulations in Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties) are followed.

(4) The storage tank system meets the applicable technical, administrative and operational requirements for underground tank systems specified in Subchapter E (relating to technical standards for underground storage tanks) or for aboveground tank systems specified in Subchapter G (relating to simplified program for small aboveground storage tanks).

(5) The Department has received a signed right of entry form.

(6) The owner of an underground storage tank system has met the applicable financial responsibility requirements of Subchapter H (relating to financial responsibility requirements for owners and operators of underground storage tanks and storage tank facilities).

(7) If required, the owner submits a current Spill Prevention and Response Plan that meets the Department's requirement under Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904).

(b) The owner/operator of a storage tank system who causes or allows violations of the act, regulations thereunder, an order of the Department, or a condition of a permit issued under the act is subject to administrative or other actions including suspension, modification or revocation of the permit.

GENERAL OPERATING PERMITS

§ 245.221. Scope.

Storage tank systems not covered by § 245.211 (relating to scope) are subject to general operating permits.

§ 245.222. Application requirements.

Applications for a general operating permit shall be submitted on a Department form. The application shall certify the following:

(1) General requirements for all storage tank systems are as follows:

(i) The storage tank system is properly registered, including payment of registration fees if necessary.

(ii) Tank handling and inspection activities are performed by Department certified individuals, as specified in Subchapter B (relating to certification program for installers and inspectors of storage tanks and storage tank facilities).

(iii) The storage tank system is in compliance with applicable administrative, technical and operational requirements as specified in Subchapter E or Subchapter F (relating to technical standards for underground storage tanks; and technical standards for aboveground storage tanks and facilities).

(iv) The Department has received a right of entry form signed by the owner and the operator.

(2) In addition to the requirements of paragraph (1), an owner of an underground storage tank system shall meet the applicable financial responsibility requirements of Subchapter H (relating to financial responsibility requirements for owners and operators of underground storage tanks and storage tank facilities).

(3) In addition to the requirements of paragraph (1), an owner of an aboveground storage tank system shall meet the following requirements:

(i) A current Spill Prevention Response Plan, that is in compliance with Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904), is filed with the Department.

(ii) For new tanks, proof that an appropriate tightness test of the aboveground tank system has been completed.

SITE SPECIFIC INSTALLATION PERMITS

§ 245.231. Scope.

Site specific installation permits are required prior to the construction, reconstruction or installation of one or more of the following:

(1) New aboveground storage tank systems with a capacity greater than 21,000 gallons at an existing large aboveground storage tank facility.

(2) New large aboveground storage tank facilities.

(3) New underground field constructed storage tank systems.

(4) New underground highly hazardous substance tanks.

(5) New small aboveground highly hazardous substance tanks that are subject to the requirements in §§ 245.232(a)(1)—(3) and 245.236(b) (relating to general requirements; and public notice).

§ 245.232. General requirements.

(a) Applicants for site-specific permits shall provide the following:

(1) Certification that the tank handling and inspection activities will be performed by Department certified individuals, as specified in Subchapter B (relating to certification program for installers and inspectors of storage tanks and storage tank facilities).

(2) Certification that the storage tank system will be in compliance with applicable administrative, technical and operational requirements as specified in Subchapters E—G (relating to technical standards for underground storage tanks; technical standards for aboveground storage tanks and facilities; and simplified program for small aboveground storage tanks).

(3) A Department right of entry form signed by the owner and the operator.

(4) The information required by §§ 245.233 and 245.234 (relating to mapping requirements; and siting requirements).

(5) The environmental assessment required by § 245.235 (relating to environmental assessment).

(b) In addition to the items required by subsection (a), owners of aboveground storage tank systems or facilities required to apply for a site specific permit shall include:

(1) A current Spill Prevention Response Plan that is in compliance with Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904).

(2) Proof of notification to the municipality and county prior to submitting the application for a site specific installation permit under section 1101(a) of the act (35 P. S. § 6021.1101(a)) and § 245.236 (relating to public notice).

§ 245.233. Mapping requirements.

(a) A site-specific permit application shall contain maps and plans of the proposed storage tank system or facility site showing the following:

(1) The boundaries for the proposed facility site.

(2) The location and names of public roads within or adjacent to the proposed facility site.

(3) The location of proposed monitoring wells.

(4) The municipality and county.

(5) The elevation and location of test borings and core samples.

(6) The ownership, if known, location and extent of known workings of active, inactive and abandoned underground mines including mine openings within the proposed permit site.

(7) Streams, lakes or surface watercourses located on or adjacent to the proposed permit site.

(8) The location and ownership of public or private groundwater supplies within 2,500 feet of the proposed permit site.

(9) The location and ownership of known public and private surface water intakes for a distance of 20 miles downstream from the site.

(10) Sufficient slope measurements to adequately represent the existing land surface configuration of the proposed permit site.

(11) Other information the Department deems relevant.

(b) Maps, plans and cross sections required by this section shall be accurately surveyed and on a scale satisfactory to the Department, not less than 1:400 and in a manner satisfactory to the Department. The maps, plans and cross sections shall be prepared by a Pennsylvania registered professional engineer, Pennsylvania registered land surveyor or Pennsylvania registered professional geologist with assistance from experts in related fields.

§ 245.234. Siting requirements.

(a) The Department will not issue a site specific storage tank system or facility installation permit if:

(1) The installation of tank systems and facilities is proposed on 100-year floodplains or a larger area that the flood of record has inundated unless the industrial use on the proposed site was in existence as of August 5, 1989.

(2) The installation of tank systems and facilities is proposed in wetlands in a manner inconsistent with Chapter 105 (relating to dam safety and waterway management).

(b) The applicant shall provide the following additional information if appropriate:

(1) Over areas underlain by carbonate bedrock, the applicant shall provide information and analysis to the Department which assesses the prevalence of solution channels and the potential for sinkholes at the facility site.

(2) If any part of a proposed facility has been previously mined by deep mining methods, the applicant shall provide the results of an engineering study of the proposed site by a Pennsylvania registered professional engineer or Pennsylvania registered professional geologist. The study shall be detailed enough to assess the potential for and degree of surface subsidence. The study shall also include methods which have been used or will be used to stabilize the surface. The applicant shall provide assurance that minerals providing surface support will not be mined as long as the facility stores regulated substances.

§ 245.235. Environmental assessment.

(a) An application for a site specific permit shall include an environmental assessment on a form prescribed by the Department.

(b) An environmental assessment in a permit application shall include detailed analysis of the potential impact of the proposed facility on the environment, public health and public safety, including air quality, water quality, threatened or endangered species and water uses. The applicant shall consider environmental features such as recreational river corridors, State and Federal parks, historic and archaeological sites, National wildlife refuges, State and Federal natural areas, prime farmland, wetland, special protection watersheds designated under Chapter 93 (relating to water quality standards), public water supplies and other features deemed appropriate by the Department or the applicant.

(c) The Department, after consultation with appropriate governmental agencies and potentially affected persons, will evaluate the assessment provided under subsection (a) to determine whether the proposed operation has the potential to cause environmental harm. If the Department determines that the proposed operation has that potential, it will notify the applicant in writing.

(d) If the Department or the applicant determines that the proposed operation may cause environmental harm, the applicant shall provide the Department with a written explanation of how it plans to mitigate the potential harm.

§ 245.236. Public notice.

(a) The owner of a proposed new large aboveground storage tank facility or proposed aboveground storage tank system with greater than 21,000 gallons capacity shall provide written notice to the local municipality and county in which the proposed aboveground system or facility is to be located 90 days prior to construction.

(b) The owner proposing to install a new highly hazardous substance tank shall provide written notice to the local municipality and county in which the storage tank system is proposed to be located.

§ 245.237. Public hearings.

Upon submission to the Department of a permit application to construct a new large aboveground storage tank facility or a new highly hazardous substance storage tank system, the Department may hold a public hearing in the municipality or county in which the aboveground storage tank facility or highly hazardous substance tank system is proposed to be located.

(*Editor's Note*: Subchapter E is new. It has been printed in regular type to enhance readibility.)

Subchapter E. TECHNICAL STANDARDS FOR UNDERGROUND STORAGE TANKS

GENERAL

Sec.
245.401. Purpose.
245.402. Scope.
245.403. Applicability.
245.404. Variances.
245.405. Codes and standards.

FACILITY INSPECTIONS

245.411. Inspection frequency.

UNDERGROUND STORAGE TANK SYSTEMS: DESIGN, CONSTRUCTION, INSTALLATION AND NOTIFICATION

245.421. Performance standards for new underground storage tank systems.
245.422. Upgrading of existing underground storage tank systems.
245.423. Registration requirements.
245.424. Standards for new field constructed tank systems.
245.425. Reuse of removed tanks.

GENERAL OPERATING REQUIREMENTS

245.431. Spill and overfill control.
245.432. Operation and maintenance including corrosion protection.
245.433. Compatibility.
245.434. Repairs allowed.
245.435. Reporting and recordkeeping.

RELEASE DETECTION

245.441. General requirements for underground storage tank systems.
245.442. Requirements for petroleum underground storage tank systems.
245.443. Requirements for hazardous substance underground storage tank systems.
245.444. Methods of release detection for tanks.
245.445. Methods of release detection for piping.
245.446. Release detection recordkeeping.

OUT-OF-SERVICE UNDERGROUND STORAGE TANK SYSTEMS AND CLOSURE

245.451. Temporary closure.
245.452. Permanent closure and changes-in-service.
245.453. Assessing the site at closure or change-in-service.
245.454. Applicability to previously closed underground storage tank systems.
245.455. Closure records.

GENERAL

§ 245.401. Purpose.

This subchapter establishes the operational and technical requirements for underground storage tanks and underground storage tank facilities.

§ 245.402. Scope.

This subchapter applies to underground storage tanks regulated under the act and this chapter.

§ 245.403. Applicability.

(a) *General.* The requirements of this subchapter apply to owners and operators, as well as installers and inspectors of underground storage tank systems as defined in § 245.1 (relating to definitions), except as otherwise provided in subsection (b).

(b) *Deferrals.* Sections 245.441—245.446 (relating to release detection) do not apply to an underground storage tank system that stores fuel solely for use by emergency power generators.

§ 245.404. Variances.

When unique or peculiar circumstances make compliance with this subchapter technically infeasible or unsafe, the Department may, upon written application from the owner/operator of a storage tank system subject to this subchapter, grant a variance from one or more specific provisions of this subchapter:

(1) A variance may only be granted when the storage tank system meets alternative technical standards that fully protect human health and the environment.

(2) A written application for a variance shall be submitted to the Department and provide the following information:

(i) The facility name and identification number for which the variance is sought.

(ii) The specific sections of this subchapter from which a variance is sought.

(iii) The unique or peculiar conditions which make compliance with the sections identified in subparagraph (ii) technically infeasible or unsafe.

(iv) Evidence, including plans, specifications and test results, which supports an alternative design, practice, schedule or method as being no less protective of human

health and the environment than the requirements of the sections identified in subparagraph (ii).

(3) When granting the variance, the Department may impose specific conditions necessary to ensure the adequate protection of human health and the environment.

(4) The Department will provide to the applicant a written notice of approval, approval with additional conditions or denial. Granted variances will be published in the *Pennsylvania Bulletin*.

(5) The Department may not grant any variance which would result in regulatory controls less stringent than other applicable Federal or State regulations.

§ 245.405. Codes and standards.

All regulated underground storage tank systems shall comply with applicable industry codes. By policy, the Department can recognize industry codes and practices which can be used to comply with this chapter. A list of industry codes and practices which may be used to comply with this subchapter may be obtained from the Department.

FACILITY INSPECTIONS

§ 245.411. Inspection frequency.

(a) *Inspection of tanks.* Underground storage tank owners or operators shall have their underground storage tank facility inspected by a certified inspector at the frequency established in subsections (b)—(d). The inspection shall include, but not be limited to, leak detection, assessment of the underground tank system and ancillary equipment, and release prevention measures.

(b) *Initial inspections.*

(1) Tank facilities with tank systems installed prior to December 1989 shall be inspected prior to December 22, 1998, or by _____ (*Editor's Note*: The blank refers to a date 2 years after the effective date of the adoption of this proposal), whichever date is later.

(2) Tank systems installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal). If the facility ownership changes, an inspection shall be completed within the first 12 months of operation.

(3) Tank facilities not inspected in accordance with paragraph (1) or (2) shall have an initial inspection by _____ (*Editor's Note*: The blank refers to a date 5 years after the effective date of the adoption of this proposal).

(c) *Subsequent facility inspections.*

(1) Subsequent facility inspections shall be conducted at least once every 5 years commencing after the last inspection, except as provided in paragraph (2).

(2) Facilities with total secondary containment of both piping and the tank shall be inspected at least once every 10 years commencing from the date of the last inspection.

(d) *Additional inspections.* Inspections in addition to those set forth in subsections (b) and (c) may be requested in writing by the Department when the Department determines the inspections are necessary to verify compliance with this subchapter.

UNDERGROUND STORAGE TANK SYSTEMS: DESIGN, CONSTRUCTION, INSTALLATION AND NOTIFICATION

§ 245.421. Performance standards for new underground storage tank systems.

To prevent releases due to structural failure, corrosion or spills and overfills for as long as the underground storage tank system is used to store regulated substances, owners and operators of new underground storage tank systems shall ensure that the system meets the following requirements:

(1) *Tanks.* A tank shall be properly designed and constructed. A tank or portion of a tank that is underground and routinely contains product shall be protected from corrosion in accordance with a code of practice developed by a Nationally recognized association or independent testing laboratory, using one of the following methods:

(i) The tank is constructed of fiberglass-reinforced plastic.

(ii) 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 § 245.432(3) (relating to operation and maintenance including corrosion protection).

(D) Cathodic protection systems are operated and maintained in accordance with § 245.432.

(iii) The tank is constructed of a steel-fiberglass-reinforced plastic composite.

(iv) The tank is constructed of metal without additional corrosion protection measures if:

(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.

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

(2) *Piping.* The piping that routinely contains regulated substances shall be protected from deterioration. Piping that is in contact with the ground shall 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 using one of the following methods:

(i) The piping is constructed of fiberglass reinforced plastic.

(ii) 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 § 245.432(3).

(D) Cathodic protection systems are operated and maintained in accordance with § 245.432.

(iii) The piping is constructed of metal without additional corrosion protection measures if:

(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.

(B) Owners and operators maintain records that demonstrate compliance with clause (A) for the remaining life of the piping.

(3) *Spill and overfill prevention equipment.*

(i) Except as provided in subparagraph (iii), to prevent spilling and overfilling associated with product transfer to the underground storage tank system, owners and operators shall ensure that their systems have 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.

(B) Overfill prevention equipment that will do one or more of the following:

(I) Automatically shut off flow into the tank when the tank is no more than 95% full.

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

(III) Restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm 1 minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.

(ii) Bypassing overfill protection is prohibited—for example, bypassing the flow vent valve with coax vapor recovery or a spill bucket drain valve is prohibited.

(iii) Owners and operators are not required to use the spill and overfill prevention equipment specified in subparagraph (i) if the underground storage tank system is filled by transfers of no more than 25 gallons at one time.

(4) *Installation.* Tanks and piping shall be properly installed and system integrity tested in accordance with a code of practice developed by a Nationally recognized association or independent testing laboratory such as API 1615 and PEI RP100, and in accordance with the manufacturer's instructions.

(5) *Certification of installation.* Owners and operators shall ensure that a certified installer has demonstrated the tank system complies with paragraph (4) by providing a certification of compliance on an appropriate form provided by the Department.

§ 245.422. Upgrading of existing underground storage tank systems.

(a) *Alternatives allowed.* By December 22, 1998, existing underground storage tank systems shall comply with one of the following requirements:

(1) New underground storage tank system performance standards under § 245.421 (relating to performance standards for new underground storage tank systems).

(2) The upgrading requirements in subsections (b)—(d).

(3) Closure requirements under §§ 245.451—245.455 (relating to out-of-service underground storage tank systems and closure), including applicable requirements for corrective action under Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties).

(b) *Tank upgrading requirements.* Steel tanks shall 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 the following conditions are met:

(i) The lining is installed in accordance with § 245.434 (relating to repairs allowed).

(ii) 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 § 245.421(1)(ii)(B)—(D) and the integrity of the tank is ensured using one or more of the following methods:

(i) 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.

(ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with § 245.444(4)—(8) (relating to methods of release detection for tanks).

(iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two tightness tests that meet the requirements of § 245.444(3). The first tightness test shall be conducted prior to installing the cathodic protection system. The second tightness test shall be conducted between 3 and 6 months following the first operation of the cathodic protection system.

(iv) 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. Owners and operators shall maintain records that demonstrate compliance with this requirement for the remaining life of the tank.

(v) The tank is assessed for corrosion holes by a method that is determined by the Department to prevent releases in a manner that is no less protective of human health and the environment than subparagraphs (i)—(iii).

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

(i) The lining is installed in accordance with the requirements of § 245.434.

(ii) The cathodic protection system meets § 245.421(1)(ii)(B)—(D).

(c) *Piping upgrading requirements.* Metal piping and fittings that routinely contain regulated substances and are in contact with the ground shall be one or more of the following:

(1) Replaced with piping meeting the requirements of new piping in § 245.421(2)(i) and (ii).

(2) Cathodically protected in accordance with a code of practice developed by a Nationally recognized association or independent testing laboratory and meets the requirements of § 245.421(2)(ii)(B)—(D).

(3) Installed at a site that is determined to not be corrosive enough to cause a release due to corrosion for the remaining operating life of the piping under § 245.421(2)(iii).

(d) *Spill and overfill prevention equipment.* To prevent spilling and overfilling associated with product transfer to the underground storage tank system, existing underground storage tank systems shall comply with new underground storage tank system spill and overfill prevention equipment requirements in § 245.421(3).

§ 245.423. Registration requirements.

(a) An underground storage tank shall be registered with the Department prior to adding a regulated substance. The owner of a tank that was in use after May 8, 1986, shall have notified the Department of the system's existence.

(b) Owners required to submit notices under subsection (a) shall provide notices to the Department for each tank they own. Owners may provide notice for several tanks using one registration form, but owners who own tanks located at more than one facility shall file a separate registration form for each separate facility.

(c) Notices required to be submitted under subsection (a) shall provide all of the requested information on the registration form for each tank for which notice is required to be given.

(d) Owners and operators of new underground storage tank systems shall certify compliance with the following requirements in the registration form provided by the Department:

(1) Installation of tanks and piping under § 245.421(5) (relating to performance standards for new underground storage tank systems).

(2) Cathodic protection of steel tanks and piping under § 245.421(1) and (2).

(3) Financial responsibility under Subchapter H (relating to financial responsibility requirements for owners and operators of underground storage tanks and storage tank facilities).

(4) Release detection under §§ 245.442 and 245.443 (relating to requirements for petroleum underground storage tank systems; and requirements for hazardous substance underground storage tank systems).

(5) Use of a Department certified installer under § 245.21 (relating to tank handling and inspection requirements).

(e) Beginning October 24, 1988, a person who sells a tank intended to be used as an underground storage tank or a property containing an existing tank system shall notify the purchaser, in writing, of an owner's obligations under subsection (a). The following form may be used to comply with this requirement:

> Federal law (the Resource Conservation and Recovery Act) and Commonwealth law (the Storage Tank and Spill Prevention Act) require that the owner of a regulated underground storage tank notify the Pennsylvania Department of Environmental Protection of the existence of its tank.
>
> Notification for tanks brought into service after July 6, 1989, must be made prior to placing the tank system into service. Consult EPA 40 CFR Part 280 and PA Code Title 25 Chapter 245 to determine if you are affected by these laws.

(f) Every owner, including a new owner of an existing tank system, shall complete an amended registration form, provided by the Department, when one or more of the following conditions occur:

(1) Change of tank ownership—new owner only.

(2) Installation of a new tank.

(3) Closure of a tank system or component.

(4) Change in tank system service such as, but not limited to, temporary closure or change to an unregulated substance.

§ 245.424. Standards for new field constructed tank systems.

Field constructed tanks shall meet or exceed the technical requirements of a manufactured tank containing the same regulated substance. The system shall also:

(1) Be designed by a professional engineer having training and experience in the construction of underground storage tank systems.

(2) Meet the permitting requirements of Subchapter C (relating to permitting of underground and aboveground storage tank systems of facilities).

§ 245.425. Reuse of removed tanks.

Storage tanks removed from the ground may be reused as a regulated underground storage tank under the following circumstances:

(1) The tank is installed by a certified installer.

(2) The tank has been properly closed in accordance with § 245.452 (relating to permanent closure and changes-in-service).

(3) The installation meets the requirements of § 245.422 (relating to the upgrading of existing underground storage tank systems).

(4) The tank is compatible with the substance to be stored in accordance with § 245.2(c) (relating to general).

(5) Either the manufacturer or a person certified by the manufacturer warrants that the tank meets the requirements of § 245.421(1) (relating to performance standards for new underground storage tank systems), or the tank is installed with secondary containment in accordance with § 245.443(2) (relating to requirements for hazardous substance underground storage tank systems).

GENERAL OPERATING REQUIREMENTS

§ 245.431. 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.

(b) The owner and operator shall report, investigate and clean up spills and overfills in accordance with Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties).

§ 245.432. Operation and maintenance including corrosion protection.

Owners and operators of steel underground storage tank systems with corrosion protection shall comply with the following requirements to ensure that releases due to

corrosion are prevented for as long as the underground storage tank system is used to store regulated substances:

(1) Corrosion protection systems shall 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.

(2) Underground storage tank systems equipped with cathodic protection systems shall be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(i) *Frequency.* Cathodic protection systems shall be tested within 6 months of installation and at least every 3 years thereafter.

(ii) *Inspection criteria.* The criteria that are used to determine that cathodic protection is adequate as required by this section shall be in accordance with a code of practice developed by a Nationally recognized association.

(3) Underground storage tank systems with impressed current cathodic protection systems shall be inspected every 60 days to ensure the equipment is running properly.

(4) For underground storage tank systems using cathodic protection, records of the operation of the cathodic protection shall be maintained, in accordance with § 245.435 (relating to reporting and recordkeeping) to demonstrate compliance with the performance standards in this section. These records shall provide the following:

(i) The results of the last three inspections required in paragraph (3).

(ii) The results of testing from the last two inspections required in paragraph (2).

(5) Monitoring and observation wells shall be clearly identified using industry codes and standards, and caps shall be secured to prevent unauthorized or accidental access.

(6) Line leak detectors, sumps, measuring devices (including gauge sticks), gauges, corrosion protection, spill prevention, overfill prevention and other appurtenances whose failure could contribute to a release of product, shall be maintained in a good state of repair and shall function as designed.

§ 245.433. Compatibility.

Owners and operators shall use an underground storage tank system, made of or lined with materials, that is compatible with the substance stored in the underground storage tank system. Owners and operators storing alcohol blends may use the following codes to comply with the requirements of this section:

(1) American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations."

(2) American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations."

§ 245.434. Repairs allowed.

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

(1) Repairs involving a tank handling activity shall be performed by or under the direct, onsite supervision and control of a certified installer.

(2) Repairs to underground storage tank systems shall be properly conducted in accordance with a code of practice developed by a Nationally recognized association or an independent testing laboratory.

(3) Repairs to fiberglass reinforced plastic tanks may be made by the manufacturer's authorized representatives, and shall be made in accordance with a code of practice developed by a Nationally recognized association or an independent testing laboratory.

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

(5) Tanks and piping repaired in response to a release shall be tightness tested in accordance with §§ 245.444(3) and 245.445(2) (relating to methods of release detection for tanks; and methods of release detection for piping) prior to placing the system back into service except as provided as follows:

(i) The repaired tank is internally inspected in accordance with a code of practice developed by a Nationally recognized association or an independent testing laboratory.

(ii) The repaired portion of the underground storage tank system is monitored monthly for releases in accordance with a method specified in § 245.444(4)—(9).

(iii) Another test method is used that is determined by the Department to be at least as protective of human health and the environment than those listed in subparagraphs (i) and (ii).

(6) Within 6 months following the repair of a cathodically protected underground storage tank system, the cathodic protection system shall be tested in accordance with § 245.432(2) and (3) (relating to operation and maintenance including corrosion protection) to ensure that it is operating properly.

(7) Underground storage tank system owners and operators shall maintain records of each repair in response to a release for the remaining operating life of the underground storage tank system that demonstrate compliance with this section.

§ 245.435. Reporting and recordkeeping.

Owners and operators of underground storage tank systems shall cooperate fully with inspections, monitoring and testing conducted by the Department, certified installers or certified inspectors, as well as requests for document submission, testing and monitoring by the owner or operator under section 107(c) of the act (35 P. S. § 6201.107(c)).

(1) *Reporting.* Owners and operators shall submit the following applicable information to the Department:

(i) Notification for underground storage tank systems (§ 245.423 (relating to registration requirements)), which includes certification of installation for new underground storage tank systems (§ 245.421(5) (relating to performance standards for new underground storage tank systems)).

(ii) Reports of confirmed, reportable releases (§ 245.305(d) (relating to reporting releases)).

(iii) A site characterization report (§ 245.310 (relating to site characterization report)).

(iv) Remedial action plans (§ 245.311 (relating to remedial action plan)), remedial action progress reports (§ 245.312 (relating to remedial action)) and remedial action completion reports (§ 245.313 (relating to remedial action completion report)).

(v) A notification before permanent closure or change-in-service (§ 245.452(a) (relating to permanent closure and changes-in-service)).

(vi) In the case of permanent closure, closure records to the Department when requested.

(2) *Recordkeeping.* Owners and operators shall maintain the following information:

(i) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (§ 245.421(1)(iv) and (2)(iii)).

(ii) Documentation of operation of corrosion protection equipment (§ 245.432 (relating to operation and maintenance including corrosion protection)).

(iii) Documentation of underground storage tank system repairs in response to a release (§ 245.434(6) (relating to repairs allowed)).

(iv) Current compliance with release detection requirements (§ 245.446 (relating to release detection recordkeeping)).

(v) Results of the site investigation conducted at permanent closure (§ 245.455 (relating to closure records)).

(vi) A properly completed closure report (§ 245.452(f)).

(3) *Availability of records.* Owners and operators shall keep the records required at one of the following:

(i) At the underground storage tank site and immediately available for inspection by the Department and certified inspectors.

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

RELEASE DETECTION

§ 245.441. General requirements for underground storage tank systems.

(a) Owners and operators of new and existing underground storage tank 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.

(3) Meets the performance requirements in § 245.444 or § 245.445 (relating to methods of release detection for tanks; and methods of release detection for piping), with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after the date shown in the following table corresponding with the specified method except for methods permanently installed prior to that date, shall be capable of detecting the leak rate or quantity specified for that method in the corresponding section of this subchapter, also shown in the table, with a probability of detection (Pd) of 0.95 and a probability of false alarm (Pfa) of 0.05.

Method	*Section*	*Date After Which Pd/Pfa Must be Characterized*
Manual Tank Gauging	245.444(2)	December 22, 1990
Tank Tightness Testing	245.444(3)	December 22, 1990
Automatic Tank Gauging	245.444(4)	December 22, 1990
Statistical Inventory Reconciliation	245.444(8)	December 22, 1990
Automatic Line Leak Detectors	245.445(1)	September 22, 1991
Line Tightness Testing	245.445(2)	December 22, 1990

(i) Test method performance claims shall be verified by an independent third party using leak rates that are unknown to the tester.

(ii) When the EPA evaluation protocol for a method changes, the manufacturer shall reevaluate the method within 24 months of the new protocol's effective date for its continued use in this Commonwealth.

(b) When a release detection method operated in accordance with the performance standards in §§ 245.444 and § 245.445 indicates a release may have occurred, owners and operators shall investigate the suspected release in accordance with Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties).

(c) Owners and operators of underground storage tank systems shall comply with the release detection requirements of this subpart by December 22 of the year listed in the following table:

	SCHEDULE FOR PHASE-IN OF RELEASE DETECTION				
	Year When Release Detection is Required (by December 22 of the year indicated)				
Year System Was Installed	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965-69		P/RD			
1970-74		P	RD		
1975-79		P		RD	
1980-88		P			RD
New tanks (after December 22, 1988) immediately upon installation.					

P = Shall begin release detection for all pressurized piping in accordance with § 245.442(2)(i) (relating to requirements for petroleum underground storage tank systems).

RD = Shall begin release detection for tanks and suction piping in accordance with §§ 245.442(1), (2)(ii) and 245.443 (relating to requirements for petroleum underground storage tank systems; and requirements for hazardous substance underground storage tank systems).

(d) An existing tank system that cannot apply a method of release detection that complies with the requirements of this subchapter shall complete the closure procedures in §§ 245.451—245.455 (relating to out-of-service underground storage tank systems and closure) by the date on which release detection is required for that underground storage tank system under subsection (c).

§ 245.442. Requirements for petroleum underground storage tank systems.

Owners and operators of petroleum underground storage tank systems shall provide release detection for tanks and piping as follows:

(1) *Tanks.* Tanks shall be monitored at least every 30 days for releases using one of the methods listed in § 245.444(4)—(8) (relating to methods of release detection for tanks) except that:

(i) Underground storage tank systems that meet the performance standards in § 245.421 or § 245.422 (relating to performance standards for new underground storage tank systems; and upgrading of existing underground storage tank systems), and the monthly inventory control requirements in § 245.444(1) or (2), may use tank tightness testing (conducted in accordance with § 245.444(3)) at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under § 245.422(b), whichever is later.

(ii) Underground storage tank systems that do not meet the performance standards in § 245.421 or § 245.422 may use monthly inventory controls (conducted in accordance with § 245.444(1) or (2)) and annual tank tightness testing (conducted in accordance with § 245.444(3)) until December 22, 1998, when the tank shall be upgraded under § 245.422 or permanently closed under § 245.452 (relating to permanent closure and changes-in-service).

(iii) Tanks with a capacity of 550 gallons or less may use manual tank gauging, conducted in accordance with § 245.444(2).

(iv) Tanks with a capacity of 551 to 1,000 gallons using the longer test times specified may use manual tank gauging, conducted in accordance with § 245.444(2).

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

(i) *Pressurized piping.* Underground piping that conveys regulated substances under pressure shall meet the following requirements:

(A) Be equipped with an automatic line leak detector in accordance with § 245.445(1) (relating to methods of release detection for piping).

(B) Have an annual line tightness test conducted in accordance with § 245.445(2) or have monthly monitoring conducted in accordance with § 245.445(3).

(ii) *Suction piping.* Underground piping that conveys regulated substances under suction shall either have a line tightness test conducted at least every 3 years and in accordance with § 245.445(2), or use a monthly monitoring method conducted in accordance with § 245.445(3). Release detection is not 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) No more than one check valve is included in each suction line.

(D) Check valves are located directly below and as close as practical to or within the suction pump.

(E) A method is provided that allows compliance with clauses (B)—(D) to be readily determined.

§ 245.443. Requirements for hazardous substance underground storage tank systems.

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

(1) Release detection at existing underground storage tank systems shall meet the requirements for petroleum underground storage tank systems in § 245.442 (relating to requirements for petroleum underground storage tank systems). By December 22, 1998, all existing hazardous substance underground storage tank systems shall meet the release detection requirements for new systems in paragraph (2).

(2) Release detection at new hazardous substance underground storage tank systems shall meet the following requirements:

(i) *Secondary containment systems.*

(A) Secondary containment systems shall be designed, constructed and installed to:

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

(II) Prevent the release of regulated substances to the environment at any time during the operational life of the underground storage tank system.

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

(B) The provisions of § 264.193 (relating to secondary containment) may be used to comply with the requirements of this paragraph.

(ii) Double walled tanks shall be designed, constructed and installed to:

(A) Contain a release from any portion of the inner tank within the outer wall.

(B) Detect the failure of the inner wall.

(iii) External liners, including vaults, shall be designed, constructed and installed to:

(A) Contain 100% of the capacity of the largest tank within its boundary.

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

(C) Surround the tank completely making it capable of preventing lateral as well as vertical migration of regulated substances.

(iv) Underground piping shall be equipped with secondary containment that satisfies the requirements of subparagraph (i)—for example, trench liners or jacketing of double-walled pipe. In addition, underground piping that conveys regulated substances under pressure shall be equipped with an automatic line leak detector in accordance with § 245.445(1) (relating to methods of release detection for piping).

(v) Other methods of release detection may be used if owners and operators:

(A) Demonstrate to the Department that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in § 245.444(2)—(9) can detect a release of petroleum.

(B) Provide information to the Department on effective corrective action technologies, health risks and chemical and physical properties of the stored substance, and the characteristics of the underground storage tank site.

(C) Obtain approval from the Department to use the alternate release detection method before the installation and operation of the new underground storage tank system.

§ 245.444. Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of § 245.442 (relating to requirements for petroleum underground storage tank systems) shall be conducted in accordance with the following:

(1) *Inventory control.* Product inventory control, or another test of equivalent performance, shall be conducted monthly to detect a release of at least 1.0% of flowthrough plus 130 gallons on a monthly basis in the following manner:

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

(ii) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 of an inch.

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

(iv) Deliveries are made through a drop tube that extends to within 1 foot of the tank bottom.

(v) Product dispensing is metered and recorded within an accuracy of at least 6 cubic inches for every 5 gallons of product withdrawn.

(vi) Dispenser meters shall be calibrated.

(vii) The measurement of any water level in the bottom of the tank is made to the nearest 1/8 of an inch at least once a month.

(2) *Manual tank gauging.* Manual tank gauging shall meet the following requirements:

(i) 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.

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

(iii) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest 1/8 of an inch.

(iv) A leak is suspected and subject to Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties) if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity	Minimum Duration of Test	Weekly Standard (one test)	Monthly Standard (average of) four tests)	Periodic Tightness Test Required
550 gallons or less	36 hours	10 gallons	5 gallons	No
551—1,000 gallons: 64″ diameter tank	44 hours	9 gallons	4 gallons	No
551—1,000 gallons: 48″ diameter tank	58 hours	12 gallons	6 gallons	No
551—1,000 gallons	36 hours	13 gallons	7 gallons	Yes
1,001—2,000 gallons	36 hours	26 gallons	13 gallons	Yes

(v) 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 paragraph (1). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this section.

(3) *Tank tightness testing.* Tank tightness testing, or another test of equivalent performance, shall 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.

(4) *Automatic tank gauging.* Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control shall meet one of the following requirements:

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

(ii) For tank gauges installed prior to December 22, 1990, that do not meet the requirements of subparagraph (i), inventory control, or another test of equivalent performance, shall also be conducted in accordance with paragraph (1).

(5) *Vapor monitoring.* Testing or monitoring for vapors within the soil gas of the excavation zone shall meet the following requirements:

(i) The materials used as backfill are sufficiently porous—for example, gravel, sand or crushed rock—to readily allow diffusion of vapors from releases into the excavation area.

(ii) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile—for example, 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.

(iii) 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.

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

(v) 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 of that substance or a tracer compound placed in the tank system.

(vi) In the underground storage tank excavation zone, the site is evaluated to ensure compliance with the requirements in subparagraphs (i)—(iv) 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.

(vii) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering in accordance with § 245.432 (relating to operation and maintenance including corrosion protection).

(6) *Groundwater monitoring.* Testing or monitoring for liquids on the groundwater shall meet the following requirements:

(i) The regulated substance stored is immiscible in water and has a specific gravity of less than one.

(ii) Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soils between the underground storage tank system and the monitoring wells or devices is not less than 0.01 cm/sec—for example, the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials.

(iii) The slotted portion of the monitoring well casing shall be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substances on the water table into the well under both high and low groundwater conditions.

(iv) Monitoring wells shall be sealed from the ground surface to the top of the filter pack.

(v) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible.

(vi) The continuous monitoring devices or manual methods used can detect the presence of at least 1/8 of an inch of free product on top of the groundwater in the monitoring wells.

(vii) Within and immediately below the underground storage tank system excavation zone, the site is evaluated to ensure compliance with subparagraphs (i)—(v) 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.

(viii) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering in accordance with § 245.432.

(7) *Interstitial monitoring.* Interstitial monitoring between the underground storage tank 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:

(i) For double-walled underground storage tank systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product.

(ii) For underground storage tank systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the underground storage tank system and the secondary barrier.

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

(B) The barrier is compatible with the regulated substance stored so that a release from the underground storage tank system will not cause a deterioration of the barrier allowing a release to pass through undetected.

(C) For cathodically protected tanks, the secondary barrier shall 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 floodplain, unless the barrier and monitoring designs are for use under these conditions.

(F) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering in accordance with § 245.432.

(iii) 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.

(8) *Statistical Inventory Reconciliation (SIR).* SIR shall meet the performance standards of paragraph (9)(i) for monthly monitoring.

(i) The owner or operator shall follow the instructions of the SIR manufacturer's protocol.

(ii) A separate report for each tank monitored shall be maintained by the owner/operator in accordance with § 245.446(2) (relating to release detection recordkeeping). Each report shall meet the following requirements:

(A) Owners and operators shall have reports available within 7 days of the end of the monitored period.

(B) A valid report shall include the calculated leak rate, positive for out of tank and negative for into tank, minimum detectable leak rate (MDL), leak detection threshold, probability of detection (Pd) and probability of false alarm (Pfa) which the supplied data supports.

(C) A valid report shall also include one of the following test results:

(I) If the calculated leak rate, absolute value, is less than the leak threshold and the MDL is less than or equal to the certified performance standard (paragraph (3), paragraph (9)(i) or § 245.445(2) (relating to methods of release detection for piping)), the test result is "pass."

(II) If the calculated leak rate, absolute value is greater than the leak threshold, the test result is "fail."

(III) If the MDL exceeds the certified performance standard and the calculated leak rate is less than the leak threshold, the test result is "inconclusive." An inconclusive result is considered a suspected leak and shall be investigated in accordance with § 245.304 (relating to investigation of suspected releases).

(9) *Other methods.* Other types of release detection methods, or a combination of methods, may be used if the owner or operator can demonstrate to the Department that one of the following exists:

(i) 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.

(ii) It can detect a release as effectively as any of the methods allowed in paragraphs (3)—(8). In comparing methods, the Department will 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 conditions imposed by the Department on its use to ensure the protection of human health and the environment.

§ 245.445. Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of § 245.442 (relating to requirements for petroleum underground storage tank systems) shall be conducted in accordance with the following:

(1) *Automatic line leak detectors.* Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect 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 shall be conducted in accordance with the manufacturer's requirements.

(2) *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 1 1/2 times the operating pressure.

(3) *Applicable tank methods.* The methods in § 245.444(5)—(9) (relating to methods of release detection for tanks) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

§ 245.446. Release detection recordkeeping.

Underground storage tank system owners and operators shall maintain records in accordance with § 245.435 (relating to reporting and recordkeeping) demonstrating compliance with the applicable requirements of §§ 245.441—245.446 (relating to release detection). These records shall include the following:

(1) Written performance claims pertaining to a release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, shall be maintained for the entire time the release detection system is in use at the facility.

(2) The results of any sampling, testing or monitoring shall be maintained for at least 1 year, except that the results of tank tightness testing conducted in accordance with § 245.444(3) (relating to methods of release detection for tanks) shall be retained until the next test is conducted.

(3) Written documentation of all calibration, maintenance and repair of release detection equipment permanently located onsite shall be maintained for at least 1 year after the servicing work is completed. Schedules of required calibration and maintenance provided by the release detection equipment manufacturer shall be retained for the entire time the equipment is in use at the facility.

OUT-OF-SERVICE UNDERGROUND STORAGE TANK SYSTEMS AND CLOSURE

§ 245.451. Temporary closure.

(a) When an underground storage tank system is temporarily closed, owners and operators shall continue operation and maintenance of corrosion protection in accordance with § 245.432 (relating to operation and maintenance including corrosion protection), and release detection in accordance with §§ 245.441—245.446 (relating to release detection). Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties) shall be complied with if a release is suspected or confirmed. Release detection is not required as long as the underground storage tank system is empty. The underground storage tank system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (1 inch) of

residue, or 0.3% by weight of the total capacity of the underground storage tank system, remain in the system.

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

(1) Vent lines shall be open and functioning.

(2) All other lines, pumps, manways and ancillary equipment shall be capped and secure.

(c) When an underground storage tank system is temporarily closed for more than 12 months, owners and operators shall permanently close the underground storage tank system if it does not meet either performance standards in § 245.421 (relating to performance standards for new underground storage tank systems) for new underground storage tank systems or the upgrading requirements in § 245.422 (relating to upgrading of existing underground storage tank systems), except that the spill and overfill equipment requirements do not have to be met. Owners and operators shall permanently close the substandard underground storage tank systems at the end of this 12 month period in accordance with §§ 245.452—245.455, unless the Department provides an extension of the 12 month temporary closure period. Owners and operators shall complete a site assessment in accordance with § 245.453 (relating to assessing the site at closure or change-in-service) before an extension may be applied for.

§ 245.452. Permanent closure and changes-in-service.

(a) At least 30 days before beginning either permanent closure or a change-in-service under subsections (b)—(d), or within another reasonable time determined by the Department, owners and operators shall notify the Department on a form provided by the Department of their intent to permanently close or make the change-in-service, unless the action is in response to corrective action. The required assessment of the excavation zone under § 245.453 (relating to assessing the site at closure or change-in-service) shall be performed after notifying the Department but before completion of the permanent closure or a change-in-service.

(b) To permanently close a tank, owners and operators shall ensure that the tank is empty and clean in accordance with a Nationally recognized code of practice such as API 2015 by removing the liquids and accumulated sludges. Tanks taken out of service permanently shall also be either removed from the ground or filled with a nonshrinking, inert solid material.

(c) Replacement of the underground piping connected to a storage tank shall be considered a permanent closure of that part of the underground storage tank system. The requirements applicable to permanent closure of an underground storage tank system also apply to the permanent closure of system piping.

(d) Continued use of an underground storage tank system to store a nonregulated substance is considered a change-in-service. Continued use of an underground storage tank system in a manner which would exempt the underground storage tank system from the definition of "underground storage tank" in § 245.1 (relating to definitions) is also considered a change-in-service. Before a change-in-service, owners and operators shall ensure that the tank is empty and clean in accordance with a Nationally recognized code of practice such as API 2015 by removing the liquid and accumulated sludge, and conduct a site assessment in accordance with § 245.453 (relating to assessing the site at closure or change-in-service).

(e) An amended registration shall be submitted by the owner to the Department.

(f) A properly completed closure report is required to permanently close a site including change-in-service as defined in subsection (d). A copy of the completed closure report shall be submitted to the Department when requested.

§ 245.453. Assessing the 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 underground storage tank site. Owners and operators shall sample for releases in a manner acceptable to the Department.

(b) If contaminated soils, contaminated groundwater or free product as a liquid or vapor is discovered under subsection (a), or by another manner, owners and operators shall begin corrective action in accordance with Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties).

§ 245.454. Applicability to previously closed underground storage tank systems.

When directed by the Department, the owner and operator of an underground storage tank system permanently closed before December 22, 1988, shall assess the excavation zone and close the underground storage tank system in accordance with this subchapter if the underground storage tank system is, in the judgment of the Department, posing a current or potential threat to human health and the environment.

§ 245.455. Closure records.

Owners and operators shall maintain records in accordance with § 245.435 (relating to reporting and recordkeeping) that are capable of demonstrating compliance with closure requirements under this subchapter. The results of the excavation zone assessment required in § 245.453 (relating to assessing the site at closure or change-in-service) shall be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

(1) By the owners and operators who took the underground storage tank system out of service.

(2) By the current owners and operators of the underground storage tank system site.

(3) By mailing these records to the Department if they cannot be maintained at the closed facility.

(*Editor's Note*: Subchapter F is new. It has been printed in regular type to enhance readability.)

Subchapter F. TECHNICAL STANDARDS FOR ABOVEGROUND STORAGE TANKS AND FACILITIES

GENERAL

Sec.
245.501. Purpose.
245.502. Scope.
245.503. Variances.
245.504. Referenced organizations.

OPERATIONS AND MAINTENANCE

Sec.
245.511. General operations and maintenance.
245.512. Facility operations and spill response plan.
245.513. Preventive maintenance and housekeeping requirements.
245.514. Security.
245.515. Labeling/marking of aboveground tank systems.
245.516. Recordkeeping requirements.

DESIGN, CONSTRUCTION AND INSTALLATION

Sec.
245.521. Performance standards for aboveground storage tanks.
245.522. New aboveground tank installations and reconstructions.
245.523. Aboveground storage tanks in underground vaults.
245.524. Aboveground tank modifications.
245.525. Ancillary equipment for aboveground storage tanks.
245.526. Piping for aboveground storage tanks.

CORROSION AND DETERIORATION PREVENTION

Sec.
245.531. General corrosion and deterioration requirements.
245.532. Cathodic protection systems.
245.533. Coating exterior tank and piping surfaces.
245.534. Interior linings and coatings.

RELEASE PREVENTION AND LEAK DETECTION

Sec.
245.541. Overfill prevention requirements.
245.542. Containment requirements for aboveground storage tank systems.
245.543. Leak detection requirements.

ABOVEGROUND STORAGE TANK INSPECTIONS

Sec.
245.551. General requirements for third party inspections.
245.552. In-service inspections.
245.553. Out-of-service inspections.
245.554. Installation and modification inspections.

CLOSURE AND REMOVAL FROM SERVICE REQUIREMENTS

Sec.
245.561. Permanent closure or change-in-service.
245.562. Temporary removal-from-service.

GENERAL

§ 245.501. Purpose.

This subchapter establishes technical standards and requirements for operations and maintenance, design, construction and installation, corrosion and deterioration prevention, release prevention and leak detection, inspection, and closure and removal from service requirements for large aboveground storage tanks and facilities regulated under the act. Regulated aboveground storage tanks are defined in § 245.1 (relating to definitions).

§ 245.502. Scope.

The standards and requirements established in this subchapter shall be applied through the use of appropriate current codes of practice developed by Nationally recognized associations such as, but not limited to, those referenced at § 245.504 (relating to referenced organizations) and through the use of manufacturer's specifications and sound engineering practices. This subchapter is not intended to supersede other State and Federal regulations or jurisdictional requirements when they are more restrictive than the requirements in this part. This subchapter does not apply to small aboveground storage tanks unless otherwise referenced in Subchapter G (relating to simplified program for small aboveground storage tanks).

§ 245.503. Variances.

When unique or peculiar circumstances make compliance with this subchapter technically infeasible or unsafe, the Department may, upon written application from the owner/operator of a storage tank system subject to this subchapter, grant a variance from one or more specific provisions of this subchapter.

(1) A variance may only be granted if the storage tank system meets alternative technical standards that fully protect human health and the environment.

(2) A written application for a variance shall be submitted to the Department and provide the following information:

(i) The facility name and identification number for which the variance is sought.

(ii) Specific sections of this subchapter from which the variance is sought.

(iii) The unique or peculiar conditions which make compliance with the sections identified in subparagraph (ii) technically infeasible or unsafe.

(iv) Evidence, including data, plans, specifications and test results, which supports an alternative design, practice, schedule or method as being at least as protective of human health and the environment as the requirements of the sections identified in subparagraph (ii).

(3) The Department will not grant a variance which would result in regulatory controls less stringent than other applicable Federal or State regulations, such as 37 Pa. Code Part I, Subpart B (relating to flammable and combustible liquids) and 40 CFR Part 112 (relating to oil pollution prevention).

(4) When granting the variance, the Department may impose specific conditions necessary to assure that the variance will adequately protect the public health, safety or welfare and the environment.

(5) The Department will provide to the applicant a written notice of approval, approval with conditions or denial.

§ 245.504. Referenced organizations.

(a) Nationally recognized associations which are referenced throughout this subchapter are as follows:

(1) American Concrete Institute (ACI).

(2) American National Standards Institute (ANSI).

(3) American Petroleum Institute (API).

(4) American Society of Mechanical Engineers (ASME).

(5) American Society for Nondestructive Testing (ASNT).

(6) American Society for Testing and Materials (ASTM).

(7) National Association of Corrosion Engineers (NACE).

(8) National Fire Protection Association (NFPA).

(9) Petroleum Equipment Institute (PEI).

(10) Steel Structures Painting Council (SSPC).

(11) Steel Tank Institute (STI).

(12) Underwriters Laboratory (UL).

(b) Nationally recognized codes and standards shall be used in conjunction with manufacturer's specifications to comply with this subchapter. When used to meet the technical standards and requirements of this subchapter, the most current or latest edition of the codes and standards shall be applied. Other Nationally recognized codes and standards, not referenced in this part, may also be used to comply with this subchapter, when appropriate.

(c) When Nationally recognized codes and standards are updated, facilities or storage tank systems installed to

previously existing standards prior to the update, will not automatically be required to be upgraded to meet the new standard.

OPERATIONS AND MAINTENANCE

§ 245.511. General operations and maintenance.

An aboveground storage tank facility owner/operator shall implement and have onsite a written operations and maintenance plan which assures conformance with applicable safety and operational standards, compliance with applicable Federal and State regulations, and shall use appropriate work practices and procedures.

§ 245.512. Facility operations and spill response plan.

A Spill Prevention Response Plan (Plan), which addresses the requirements described in Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904), shall be submitted to the Department for aboveground storage tank facilities with an aggregate aboveground storage capacity greater than 21,000 gallons. A current copy of the Plan shall be readily available at the facility at all times.

§ 245.513. Preventive maintenance and housekeeping requirements.

(a) An aboveground storage tank facility owner/operator shall establish and implement a preventive maintenance and housekeeping program which protects the integrity of the system from degradation and protects the public health and the environment.

(b) Route maintenance inspection procedures shall be established and implemented at each storage tank facility.

(1) An owner/operator is responsible to assure that a visual inspection is performed each day of normal operation. The visual inspection may be accomplished by or supplemented with electronic surveillance and shall include:

(i) A check of the facility to ensure that no potential hazardous environmental conditions exist. This includes a check for evidence of a release—for example, spill, overflow or leakage.

(ii) A check of the containment areas for accumulation of water and a confirmation that containment drain valves are secured in a closed position when not in use. If excessive water has accumulated, it shall be drained off and disposed of in accordance with applicable State and Federal requirements.

(2) An owner/operator is responsible to assure that a maintenance inspection of the facility and equipment is performed each month. The maintenance inspection shall include:

(i) An inspection of the tank system exterior surfaces for deterioration and maintenance deficiencies including a visual check for cracks, areas of wear, excessive settlement and deterioration of the foundation and supports.

(ii) Ancillary equipment and appurtenances shall be visually checked for operational malfunctions.

(iii) An inspection of containment and transfer areas for cracks, defects and fire hazards.

(iv) A check of overfill prevention equipment and monitoring of leak detection system.

(v) The monthly maintenance inspection report shall be completed and signed by the individual who conducted the visual inspections and maintained for 1 year.

(3) An owner/operator is responsible to establish a process to assure that storage tank vents are operational and free of restrictions.

(c) Housekeeping practices shall be established and implemented in a manner that reduces the possibility of accidental spills and safety hazards to plant or facility personnel.

§ 245.514. Security.

An owner/operator is responsible to assure that appropriate security measures and procedures based on the facility location are established and implemented to protect the environment and the public. These security measures and procedures may include, but are not limited to, fencing, lighting, access control, locked entrances and securing of valves and dispensers.

§ 245.515. Labeling/marking of aboveground tank systems.

(a) An owner/operator is responsible to assure aboveground tank systems are labeled/marked in accordance with industry standards and in compliance with Federal and State requirements. Tank labels/marks shall be easily legible from outside the containment area and shall be capable of readily identifying the regulated substance stored.

(b) The owner/operator shall be capable of readily identifying the substances transferred in the piping system and be able to determine flow control points, including pumps, valves and dispensers through labeling or other suitable means.

§ 245.516. Recordkeeping requirements.

(a) Owners and operators of aboveground tank facilities shall maintain required records. If records are maintained offsite, the records shall be easily obtained and provided to the Department upon request.

(b) Permanent records for new systems and available records for existing systems shall be maintained for the operational life of the tank system and retained for a minimum of 1 year after the tank system has been removed. Permanent records include the following:

(1) Original installation and modification of tank system design specifications.

(2) Site specific Department correspondence and documentation.

(3) Federal and State regulatory permits.

(4) Tank handling activity installation and major modification inspection results.

(5) Reportable releases.

(c) Temporary records shall be maintained as follows:

(1) The current registration certificate.

(2) The leak detection records for the past 12 months.

(3) The last two results of cathodic protection monitoring, when a cathodic protection system is in use.

(4) The routine monthly maintenance inspections for the past 12 months.

(5) The last third party in-service inspection report.

(6) The last third party out-of-service inspection report.

DESIGN, CONSTRUCTION AND INSTALLATION

§ 245.521. Performance standards for aboveground storage tanks.

(a) Tank construction shall meet or exceed Nationally recognized industry association codes of practice. New tanks shall be installed in accordance with applicable codes of practice and consistent with manufacturer's or fabricator's specifications as specified in § 245.522 (relating to new aboveground tank installations and reconstructions).

(b) Tank modifications shall be in accordance with industry codes of practice as specified in § 245.524 (relating to aboveground tank modifications).

(c) Tanks shall be protected from corrosion and deterioration as specified in §§ 245.531—245.534 (relating to corrosion and deterioration prevention).

(d) A leak monitoring system shall be installed as specified in § 245.543 (relating to leak detection requirements).

(e) A release prevention system shall be installed as specified in §§ 245.541 and 245.542 (relating to overfill prevention requirements; and containment requirements for aboveground storage tank systems).

(f) Tanks shall be tested according to industry standards before being placed in service as specified in §§ 245.551—245.554 (relating to aboveground storage tank inspections).

(g) Tanks shall be inspected at installation, reconstruction or relocation and when a major modification is performed on a tank.

§ 245.522. New aboveground tank installations and reconstructions.

(a) Tanks shall be designed and constructed in accordance with an appropriate current code of practice developed by Nationally recognized associations such as UL, ACI, API, ASME, ASTM or NACE.

(b) Tanks shall have a stable foundation, capable of supporting the total weight of the tank when full of product without movement, rolling or unacceptable settling. The foundation shall minimize corrosion of the tank bottom and meet or exceed the specifications of the tank manufacturer. The foundation design and construction shall be based on sound engineering practices.

(c) Tanks shall be tested for tightness in accordance with current codes of practice developed by Nationally recognized associations and manufacturer's specifications. If a pneumatic test is used for manufactured (shop built) tanks, the fittings, welds, joints and connections shall be coated with a soap solution and checked for leaks. Aboveground field constructed storage tanks shall be hydrostatically tested. Deficiencies shall be remedied prior to tanks being placed into service. Hydrostatic test fluids shall be discharged or disposed of in accordance with State and Federal requirements.

(d) Reconstruction of tanks shall follow the current codes of practice developed by Nationally recognized associations. Reconstructed tanks shall be inspected and hydrostatically tested before being placed into service. Reconstructed tanks shall meet or exceed requirements specified in § 245.521 (relating to performance standards for aboveground storage tanks). Hydrostatic test fluids shall be discharged or disposed of in accordance with State and Federal requirements.

(e) Aboveground manufactured storage tanks that are relocated to another service site shall meet the performance requirements for aboveground storage tanks and shall be tested according to industry standards and inspected before being put back in service.

§ 245.523. Aboveground storage tanks in underground vaults.

(a) The vault shall completely enclose the tank. There may be no openings in the vault enclosure except those necessary for access to, inspection of, and filling, emptying and venting of the tank. The walls and floor of the vault shall be constructed of reinforced concrete at least 6 inches thick. The top, walls and floor shall be designed to withstand the anticipated loading including loading from traffic, soil and groundwater.

(b) The vault shall be compatible with the stored substance and have a permeability of less than 1×10^{-7} cm/sec for substance stored and be water tight.

(c) A tank shall be in its own vault. Adjacent vaults may share a common wall.

(d) There may be no backfill around the tank and there shall be sufficient space between the tank and the vault to allow inspection of the tank and ancillary equipment.

(e) A vault and its tank shall be suitably anchored to withstand uplifting by either water or released substance, including when the tank is empty.

(f) Connections shall be provided to permit venting of each vault to dilute, disperse and remove vapors prior to personnel entering the vault.

(g) A vault shall be equipped with a continuous leak detection system capable of detecting vapors and liquids including water. The detection system shall activate an alarm that automatically shuts down the dispensing system if a release occurs.

(h) A vault shall have a means for personnel entry. The entry point shall have a warning sign indicating the need for procedures for safe entry into a confined space. An entry point shall be secured against unauthorized entry and vandalism.

(i) A suitable means to admit a fire suppression agent shall be provided for each vault.

(j) Tanks and ancillary equipment shall be installed, maintained and inspected in accordance with the requirements for aboveground storage tanks in this subchapter.

§ 245.524. Aboveground tank modifications.

(a) Modifications shall be designed and implemented in accordance with current codes of practice developed by Nationally recognized associations such as API, ACI, ASME, ASTM or UL.

(b) Modifications shall be performed in accordance with Nationally recognized codes and manufacturer's specifications or a professional engineer's design requirements.

(c) Aboveground tanks which are modified shall be inspected and tested according to industry standards before being put in service when a major modification has been performed on the tank shell, tank roof or tank bottom. Deficiencies shall be remedied before being returned to service.

§ 245.525. Ancillary equipment for aboveground storage tanks.

(a) Ancillary equipment shall be designed and installed in accordance with Nationally recognized codes of practice and manufacturer's specifications such as API, ASME,

ASTM, UL, PEI or ANSI. Ancillary equipment shall be in good working order and maintained according to manufacturer's specifications and accepted industry practices. Ancillary equipment shall be compatible with the stored substance.

(b) Tanks shall be appropriately vented to protect the tank from over pressurization and excessive vacuums. Vents shall meet or exceed the appropriate codes of practice developed by Nationally recognized associations such as API and NFPA. Normal venting shall allow the tank to breath when transferring the stored product. Emergency venting shall ensure that the safe pressure for the tank is not exceeded.

(c) Tank connections through which regulated substance can flow shall be equipped with an operating valve adjacent to the tank to control flow of substance. Appropriate valves shall be installed to meet or exceed current codes of practice and jurisdictional requirements. Valves shall be designed, installed and maintained according to current codes of practice.

§ 245.526. Piping for aboveground storage tanks.

(a) Piping shall be compatible with the substance stored and properly designed to resist internal and external wear, vibration and shock.

(b) New and replacement piping shall be designed, fabricated and tested in accordance with current codes of practice developed by Nationally recognized associations such as API, ASME, ANSI, NFPA, PEI or STI. Installation of piping shall meet or exceed current codes of practice and be in strict accordance with manufacturer's specifications. Piping shall be tested for tightness before being placed in service and all deficiencies remedied.

(c) Piping installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) and in contact with the soil or an electrolyte shall be adequately protected from corrosion in accordance with current codes of practice developed by Nationally recognized associations such as NACE or API.

(d) After _____ (*Editors's Note*: The blank refers to the effective date of the adoption of this proposal), new or replacement piping installed beneath the surface (underground) shall have secondary containment with leak detection.

(e) Existing piping in contact with the soil or an electrolyte, or installed beneath the surface and not meeting the standards in subsections (c) and (d) shall be tested and upgraded as follows:

(1) Begin annual testing for tightness by _____ (*Editor's Note*: The blank refers to a date 3 years after the effective date of the adoption of this proposal) and continue annual testing until piping is upgraded.

(2) Upgrade to standards in subsections (c) and (d) when the piping system is replaced or by _____ (*Editor's Note*: The blank refers to a date 10 years after the effective date of the adoption of this proposal), whichever occurs first.

(f) Aboveground piping shall be adequately supported and be protected from physical damage caused by freezing, frost heaving and vehicular traffic.

CORROSION AND DETERIORATION PREVENTION

§ 245.531. General corrosion and deterioration requirements.

(a) The tank system shall be maintained with corrosion and deterioration prevention measures.

(b) Metallic tank systems in direct contact with the soil or other electrolyte shall be evaluated by a corrosion expert to determine if cathodic protection is necessary or appropriate.

(c) Existing tank bottoms that do not meet the standards in subsection (b) shall be upgraded when the tank bottom is replaced.

§ 245.532. Cathodic protection systems.

(a) When required for corrosion prevention, the cathodic protection system shall consist of one or more of the following:

(1) Sacrificial anodes and dielectrical coating.

(2) Impressed current.

(3) Another method specified in an appropriate Nationally recognized association code of practice such as API 651 or associations such as NACE.

(b) Cathodic protection systems shall be designed by a corrosion expert and maintained to provide protection against external corrosion for the operational life of the tank system.

(c) Each cathodic protection system shall have an access point which enables the owner or operator to check on the adequacy of cathodic protection. The cathodic protection systems shall be monitored periodically as determined by the corrosion system design.

(d) Tank and piping connections of two dissimilar metals which create a galvanic cell are prohibited.

§ 245.533. Coating exterior tank and piping surfaces.

The exterior surfaces of aboveground tanks and piping shall be protected by a suitable coating which prevents corrosion and deterioration. The coating system shall be maintained throughout the entire operational life of the tank.

§ 245.534. Interior linings and coatings.

(a) Coating or lining systems may be used to protect tank interiors from corrosion. The coating or lining system shall be designed in accordance with current codes of practices such as API 652 or associations such as NACE. Any appropriate coating which is bonded firmly to the interior surfaces may be used to protect a tank from corrosion.

(b) Specific requirements are as follows:

(1) Coatings and linings shall be chemically compatible with the substance to be stored.

(2) Coating material shall be applied and cured in strict accordance with manufacturer's specifications.

(3) Coatings used to protect the bottom of a tank shall extend up the side of the tank a minimum of 18 inches, while some forms of lining may cover the entire tank interior.

(4) Coatings shall be examined for blisters and air pockets, and tested for pinholes. The coating thickness shall be checked to assure compliance with manufacturer's specifications.

(5) Defects in coating or lining systems shall be repaired or corrected prior to putting the tank or system into service.

RELEASE PREVENTION AND LEAK DETECTION

§ 245.541. Overfill prevention requirements.

(a) Owner/operators shall ensure that releases from overfills do not occur. Transfer of stored substance may not exceed the volume available in the receiving tank and the transfer shall be adequately monitored. Immediate action shall be taken to stop the flow of regulated substance prior to exceeding tank capacity or in the event that an equipment failure occurs.

(b) Tanks installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be installed with the following:

(1) A gauge or monitoring device which accurately indicates the level or volume in the tank and is visible to the individual responsible for the transfer of product. The monitoring device shall be installed, calibrated and maintained in accordance with manufacturer's specifications.

(2) A high-level alarm and an automatic high-level cut-off device or a high-level alarm and a manned operator shutdown procedure in operation.

(c) Existing tanks shall have a gauge or monitoring device installed by _____ (*Editor's Note:* The blank refers to a date 3 years after the effective date of the adoption of this proposal).

(d) An existing tank system which is taken out of service to perform a scheduled out-of-service inspection or a major modification to the tank shall be upgraded with a high-level alarm and cut-off device or a high-level alarm and a manned operator shutdown procedure prior to being put back in service.

§ 245.542. Containment requirements for aboveground storage tank systems.

(a) Containment structures shall be compatible with the substance stored and minimize deterioration to the storage tank system.

(b) Containment areas shall be designed, maintained and constructed in accordance with sound engineering practices adhering to Nationally recognized codes of practice such as NFPA, NACE, ACI or API and in compliance with State and Federal requirements.

(c) Secondary containment under the tank bottom and around underground piping shall be designed to direct any release to a monitoring point to meet leak detection requirements. Secondary containment shall be provided on a new tank at installation, and shall be provided on an existing tank at reconstruction or relocation of the tank or when the tank floor is replaced. Permeability of the secondary containment shall be less than $1x10^{-7}$ cm/sec at anticipated hydrostatic head and shall be verified at the time of installation.

(d) Aboveground tanks and loading areas shall have emergency containment structures, such as dike fields curbing and containment collection systems, which contain releases from overfills, leaks and spills, when the tank system is installed or at the next out-of-service inspection. Permeability of emergency containment shall be less than $1x10^{-6}$ cm/sec at anticipated hydrostatic head and be of sufficient thickness to prevent the released substance from penetrating the containment structure for a minimum of 72 hours, and until the release can be detected and recovered.

(e) Emergency containment areas, such as dike fields, shall be able to contain 110% of the capacity of the largest tank in the containment area.

(f) Stormwater shall be removed from the emergency containment area as soon as possible or when the water is in contact with the tank or piping and prior to the capacity of containment being reduced by 10% or more. Manually operated pumps or siphons and manually operated gravity drains may be used to empty the containment. If drain valves are used they shall be secured in the closed position when not in use. Discharge or disposal of substances from the containment structure shall comply with State and Federal requirements.

§ 245.543. Leak detection requirements.

(a) Aboveground tank systems installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall provide a method of leak detection capable of detecting a release. The leak detection method shall be monitored at least monthly and shall be installed, calibrated, operated and maintained in accordance with industry practices and manufacturer's specifications.

(1) The area beneath the tank bottom shall be monitored for leakage by visual, mechanical or electronic leak detection methods.

(2) Observation wells outside of the secondary containment structure do not satisfy the leak detection requirements.

(b) Existing aboveground storage tank systems which are not in direct contact with the containment structure, such as saddle mounted horizontal tanks, shall implement a monthly leak detection method as required in subsection (a) by _____ (*Editor's Note*: The blank refers to a date 1 year after the effective date of the adoption of this proposal).

(c) Existing aboveground storage tanks without secondary containment under the bottom of the tank that are in contact with the soil, such as vertical flat bottom tanks, and do not have cathodic protection or an internal lining shall be tested for tightness at the next scheduled service inspection after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) and continue testing for tightness at each service inspection thereafter, until the tank is upgraded.

(d) Aboveground piping shall be visually checked for leaks in accordance with the facility operations and maintenance plan.

ABOVEGROUND STORAGE TANK INSPECTIONS

§ 245.551. General requirements for third party inspections.

(a) Aboveground storage tank owners and operators shall have their storage tank systems inspected by a Department certified aboveground storage tank inspector at frequencies established by the Department. Inspections will check for compliance with State and Federal requirements and adherence to current codes of practice developed by Nationally recognized associations, tank manufacturer's instructions and design engineer's specifications.

(b) Only Department certified inspectors shall be used to satisfy requirements for:

(1) In-service inspections.

(2) Out-of-service inspections.

(3) Installation and modification inspections.

§ 245.552. In-service inspections.

(a) The in-service inspection shall follow the guidelines of a Nationally recognized association such as API 653 and API 570.

(b) The in-service inspection shall evaluate the following:

(1) Containment areas.

(2) Foundation.

(3) Tank shell.

(4) Tank roof.

(5) Appurtenances.

(6) Ancillary equipment including piping.

(7) Leak detection method.

(8) Cathodic protection system, if installed.

(c) Inspection information shall be submitted to the Department on a form provided by the Department and shall include the results of the evaluation in subsection (b) and the following:

(1) A determination of the corrosion rate of the shell and piping.

(2) A calculation of the life of the tank shell and piping based on corrosion rate.

(3) The next inspection schedule based on 1/4 of the corrosion rate life with a maximum of 5 years.

(4) The recommendations for maintaining tank system integrity.

(d) Inspection intervals for in-service inspections are as follows:

(1) Aboveground tanks installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be initially inspected within 5 years of installation.

(2) Existing tanks shall be initially inspected as follows:

(i) Tanks over 5 years old without a previous inspection shall be inspected by _____ (*Editor's Note*: The blank refers to a date 2 years after the effective date of the adoption of this proposal).

(ii) Tanks with an inspection more than 3 years prior to _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be inspected by _____ (*Editor's Note*: The blank refers to a date 3 years after the effective date of the adoption of this proposal).

(iii) Tanks with an inspection within 3 years prior to _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be inspected within 6 years of the previous inspection.

(3) Tanks shall have an in-service inspection within 1/4 of the corrosion rate life with a maximum of 5 years from the previous inspection or installation.

(4) An out-of-service inspection may replace an in-service inspection.

(e) Inspection recommendations shall be addressed.

(f) The complete inspection report shall be kept at the facility until the next out-of-service inspection is completed.

§ 245.553. Out-of-service inspections.

(a) Inspections shall follow the guidelines of a Nationally recognized association such as API 653, API 570 or ASME.

(b) The out-of-service inspection shall evaluate the following:

(1) Containment areas.

(2) Foundation and supports.

(3) Tank shell.

(4) Tank roof.

(5) Tank bottom.

(6) Appurtenances.

(7) Ancillary equipment including piping.

(8) Leak detection method.

(9) Cathodic protection system, if installed.

(10) Internal linings and coatings, if installed.

(c) Inspection information shall be submitted to the Department on a form provided by the Department and shall include the results of subsection (b) and the following:

(1) A determination of the corrosion rate for tank shell, bottom plates and piping.

(2) A calculation of the tank life and piping life based on the corrosion rate.

(3) The schedule for next out-of-service inspection, based on 1/2 of the corrosion rate life with a maximum of 10 years between inspections.

(4) The recommendations for maintaining tank system integrity and meeting performance standards.

(d) Inspection intervals for out-of-service inspections are as follows:

(1) Tanks installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be initially inspected within 10 years of installation.

(2) Existing tanks shall be initially inspected as follows:

(i) Tanks without a previous out-of-service inspection and over 10 years old shall be inspected by _____ (*Editor's Note*: The blank refers to a date 3 years after the effective date of the adoption of this proposal).

(ii) Tanks without a previous out-of-service inspection and between 5 to 10 years old shall be inspected by _____ (*Editor's Note*: The blank refers to a date 5 years after the effective date of the adoption of this proposal).

(iii) Tanks installed or inspected within the past 5 years shall be inspected within 10 years from the date of installation or the last inspection.

(3) Tanks shall have an out-of-service inspection at 1/2 of the corrosion rate life with a maximum of 10 years from the last out-of-service inspection.

(e) Deficiencies shall be remedied before the tank is returned to service.

(f) Aboveground storage tanks which can be completely examined from the exterior are exempt from out-of-service inspections except for tanks that are internally lined.

(g) The completed inspection report for out-of-service inspections shall be kept with the facility records until the next out-of-service inspection is completed and submitted to the Department.

§ 245.554. Installation and modification inspections.

(a) Aboveground storage tank systems shall be inspected by a Department certified inspector at the time of installation according to a current Nationally recognized association's code of practice and manufacturer's specifications, and the inspection report shall be kept for the operational life of the tank.

(b) Major modifications shall be inspected by a Department certified inspector at the time of modification according to current codes of practice developed by Nationally recognized associations. The inspection report shall be kept for the operational life of the tank.

(c) Tanks which are relocated or reconstructed shall be inspected by a Department certified inspector and tested for tightness in accordance with § 245.522 (relating to new aboveground tank installations and reconstructions) and current codes of practice developed by Nationally recognized associations prior to being put in service. The inspection report shall be kept for the operational life of the tank.

CLOSURE AND REMOVAL FROM SERVICE REQUIREMENTS

§ 245.561. Permanent closure or change-in-service.

Before permanent closure or change-in-service is completed, owner/operator shall comply with the following:

(1) At least 30 days before beginning either a permanent closure or change-in-service to an unregulated tank, or within a lesser time as determined by the Department, owner/operator shall notify the Department of its intent to permanently close or change-in-service from a regulated tank to an unregulated tank, unless the action is in response to a corrective action or waived by the Department.

(2) The owner/operator shall submit an amended registration form to the Department indicating the change in tank status within 30 days after the change in tank status.

(3) The owner/operators shall complete and submit a site assessment and closure report to the Department to measure for the presence of any release from the storage tank system. The assessment of the site shall be made after the notification and prior to submitting the closure report.

(4) If contaminated soil, sediment, surface water or groundwater, or free product is discovered or confirmed by either direct observation or indicated by the analytical results of sampling, the owner/operator shall proceed with the corrective action as required in Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties) or, if applicable, in accordance with remedial action agreements.

(5) Regulated substance and contents removed from the tank system including piping shall be reused, treated or disposed of in a manner consistent with applicable State and Federal waste management requirements.

(6) Tank systems shall be cleaned, rendered free of hazardous vapors and ventilated if left onsite or tank systems shall be emptied and removed from the site in a manner consistent with current industry practices and Bureau of Land Recycling and Waste Management requirements such as Chapters 263 and 299 (relating to transporters of hazardous waste; and storage and transportation of residual waste).

(7) Tanks to be permanently closed and left onsite shall be legibly marked with the date of permanent closure.

(8) The State Fire Marshal shall be notified if the tank is under a fire marshal permit.

(9) Tanks that are to be closed in place shall:

(i) Be rendered inoperable and incapable of storing liquid substance.

(ii) Be secured against unauthorized entry.

(iii) Meet the requirements specified in paragraphs (1)—(8).

§ 245.562. Temporary removal-from-service.

(a) The owner/operator shall complete and submit an amended registration form to the Department within 30 days after the change in tank status.

(b) A tank system shall be emptied and regulated substances and contents shall be reused, treated or disposed of in accordance with State and Federal requirements.

(c) A tank shall be secured against unauthorized entry and all piping entering or exiting the tank, excluding vents, shall be capped.

(d) Tank integrity shall be maintained throughout the temporary removal-from-service time and the tank shall be protected against flotation.

(e) Inspection requirements shall be maintained as specified in §§ 245.551—245.554 (relating to aboveground storage tank inspections).

(f) Tanks which are temporarily removed-from-service for 5 years or longer shall meet the requirements for permanent closure.

(*Editor's Note*: Subchapter G is new. It has been printed in regular type to enhance readability.)

Subchapter G. SIMPLIFIED PROGRAM FOR SMALL ABOVEGROUND STORAGE TANKS

GENERAL

Sec.
245.601. Purpose.
245.602. Scope.
245.603. General storage tank facility requirements.
245.604. Referenced organizations.

TECHNICAL REQUIREMENTS

Sec.
245.611. Testing requirements for new and substantially modified small aboveground storage tanks.
245.612. Performance and design standards.
245.613. Monitoring standards.
245.614. Requirements for closure.
245.615. Recordkeeping requirements.
245.616. Inspection requirements.

GENERAL

§ 245.601. Purpose.

This subchapter establishes a simplified program of technical standards and requirements for small aboveground storage tanks not exceeding 21,000 gallons capacity and regulated under the act. Regulated aboveground storage tanks are defined in § 245.1 (relating to definitions).

§ 245.602. Scope.

The standards and requirements established in this subchapter shall be applied through the use of appropriate current codes of practice developed by Nationally recognized associations such as, but not limited to, those referenced in § 245.604 (relating to referenced organizations) and through the use of manufacturer's specifications and sound engineering practices. This subchapter is not intended to supersede other State and Federal regulations or jurisdictional requirements when they are more restrictive than the requirements in this part. For certain types of tanks this subchapter may make reference to the requirements for aboveground storage tanks in Subchapter F (relating to technical standards for aboveground storage tanks and facilities).

§ 245.603. General storage tank facility requirements.

(a) The owner/operator of aboveground storage tank facilities with an aggregate aboveground storage capacity greater than 21,000 gallons shall develop and adhere to a Spill Prevention Response Plan (Plan) which addresses the requirements described in Chapter 9 of the act (35 P. S. §§ 6021.901—6021.904). The Plan shall be provided to the Department and updated as necessary. A current copy of the Plan shall be readily available at the storage tank facility at all times.

(b) The owner/operator of aboveground storage tank facilities is responsible to assure that appropriate security measures and procedures based on the facility location are established and implemented to protect the environment and the public. These security measures may include, but are not limited to, fencing, lighting, access control, locked entrances and securing of valves, drains and dispensers.

§ 245.604. Referenced organizations.

(a) Nationally recognized associations which are referenced throughout this subchapter are as follows:

(1) American National Standards Institute (ANSI).

(2) American Petroleum Institute (API).

(3) American Society of Mechanical Engineers (ASME).

(4) American Society for Testing and Materials (ASTM).

(5) National Association of Corrosion Engineers (NACE).

(6) Petroleum Equipment Institute (PEI).

(7) Steel Structures Painting Council (SSPC).

(8) Steel Tank Institute (STI).

(9) Underwriters Laboratory (UL).

(b) Nationally recognized codes and standards shall be used in conjunction with manufacturer's specifications to comply with this subchapter. When used to meet the technical standards and requirements of this subchapter, the most current or latest edition of the codes and standards shall be applied. Other Nationally recognized codes and standards, not referenced in this part, may also be used to comply with this subchapter, when appropriate.

(c) When Nationally recognized codes and standards are updated, facilities or storage tank systems installed to previously existing standards prior to the update will not automatically be required to be upgraded to meet the new standard.

TECHNICAL REQUIREMENTS

§ 245.611. Testing requirements for new and substantially modified small aboveground storage tanks.

(a) Tanks installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be tested for tightness in accordance with current codes of practice developed by Nationally recognized associations and manufacturer's specifications, except for manufactured, shop built, tanks that meet the requirements of subsection (b). The testing shall be completed, as part of the installation process, prior to putting the tank in service.

(b) Manufactured, shop built, tanks that are initially tested after full assembly at the plant do not require additional testing at installation if the manufacturer certifies that the tank was tested at the plant and the manufacturer's installation instructions do not specify additional testing.

(c) Tanks that receive major modifications to the tank shell or the tank bottom shall be tested for tightness, in accordance with current codes of practice developed by Nationally recognized associations or manufacturer's specifications, prior to being returned to service.

§ 245.612. Performance and design standards.

(a) Tanks shall be designed, constructed and installed or modified in accordance with current codes of practice developed by Nationally recognized associations such as API, ASME, ASTM, ANSI, STI and UL and the manufacturer's specifications.

(b) Tanks shall have a stable support or foundation capable of adequately supporting the total weight of the tank and its contents when in use. The support or foundation shall meet or exceed the specifications of the tank manufacturer and be designed and constructed in accordance with sound engineering practices.

(c) Ancillary equipment, including piping, shall be designed, installed and modified in accordance with current codes of practice developed by Nationally recognized associations such as API, SSPC, NACE, ASME, PEI and UL and the manufacturer's specifications. Ancillary equipment shall be compatible with the substance stored and shall be adequately protected from corrosion, excessive wear and deterioration. Protective coatings shall be maintained throughout the entire operational life of the storage tank system. Underground piping shall comply with the following:

(1) New or replacement piping installed in contact with the soil, underground, after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be in secondary containment.

(2) Existing underground piping shall be upgraded to new piping standards in paragraph (1), by _____ (*Editor's Note*: The blank refers to a date 5 years after the effective date of the adoption of this proposal), or at the next in-service inspection, whichever is sooner.

(d) Tanks installed after _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal) shall be installed with secondary containment in or under the tank bottom to provide monitoring capability to satisfy leak detection requirements in § 245.613 (relating to monitoring standards) and emergency containment to contain possible releases, such as overfills, leaks and spills. Emergency containment shall be sufficiently impermeable to contain any potential

release for a minimum of 72 hours and until the release can be detected and fully recovered in an expeditious manner.

(e) Existing tanks which do not meet the requirements specified in subsection (d) shall be upgraded with secondary containment by _____ (*Editor's Note*: The blank refers to a date 10 years after the effective date of the adoption of the proposal) and emergency containment by _____ (*Editor's Note*: The blank refers to a date 3 years after the effective date of the adoption of this proposal).

(f) Tanks installed in underground vaults after _____ (*Editor's Note*: The blank refers to the effective of the adoption of this proposal) and used for dispensing Class I and Class II motor fuels shall comply with § 245.523 (relating to aboveground storage tanks in underground vaults).

(g) The exterior of tank system shall be protected by an appropriate coating or paint which shall be maintained throughout the entire operational life of the tank system.

(h) Tanks which are internally lined shall comply with § 245.534 (relating to interior linings and coatings).

(i) Tanks shall be labeled or marked in a manner consistent with industry standards and which provides for identifying the regulated substance stored from outside the containment area.

§ 245.613. Monitoring standards.

(a) By _____ (*Editor's Note*: The blank refers to a date 1 year after the effective date of the adoption of this proposal), a method of leak detection shall be in use and monitored at least monthly. An automatic sensing device, mechanical device or other appropriate method may be used. This method, at a minimum, shall provide a visual examination of the storage tank system by the owner/operator or designated representative. If releases are detected, they shall be corrected and the provisions of Subchapter D (relating to corrective action process for owners and operators of storage tanks and storage tank facilities and other responsible parties) shall be complied with.

(b) The owner/operator shall assure that a maintenance and general operations check of the storage tank system is performed at least monthly. Deficiencies noted during the check shall be corrected. The small aboveground storage tank general operations and maintenance checklist provided by the owner/operator shall be used to document the monthly operations and maintenance check. The operations and maintenance check shall include:

(1) A visual examination of the tank system for deterioration, including, but not limited to, the tank, piping, ancillary equipment, foundation and safety equipment.

(2) A check of the containment areas for accumulation of water and removal of water as necessary.

(3) Confirmation that containment drain valves are secured in the closed position when not in use.

(4) Monitoring of the leak detection system.

(5) A check of vents for restrictions.

(6) A check of ancillary equipment for operational malfunctions.

(7) An investigation of conditions that may be a fire or safety hazard, or pose an environmental hazard.

(8) Observation for evidence of a release of regulated substance from the tank system.

§ 245.614. Requirements for closure.

(a) Tank systems shall be cleaned, rendered free from hazardous vapors and ventilated if left onsite or shall be emptied and removed from the site in a manner consistent with current industry practices and Bureau of Land Recycling and Waste Management requirements such as Chapters 263 and 299 (relating to transporters of hazardous waste; and storage and transportation of residual waste).

(b) The owner shall conduct a visual examination of the surface, soil and area surrounding and underlying the storage tank system for obvious indications or evidence of a release of regulated substance.

(1) If a release is suspected, it shall be investigated in accordance with § 245.304 (relating to investigation of suspected releases).

(2) If a release is confirmed, it shall be reported to the appropriate Department regional office responsible for the county in which the tank is located in accordance with § 245.305 (relating to reporting releases).

(c) The owner shall complete and submit an amended tank registration form to the Department within 30 days of:

(1) The completion of permanent closure.

(2) Change-in-service status of the tank.

(3) Temporary removal from service.

(d) Temporary removal from service requires that the owner/operator empty the tank system of regulated substances and conduct a visual examination of the area surrounding the tank as required in subsection (b), excluding the surface and soil underlying any tank bottom in contact with the ground. A tank may be considered to be in a temporary removal from service status when the tank is emptied and intended to remain out of use for 1 year or more.

(1) Temporary removal from service may not exceed 3 years.

(2) Monitoring standards in § 245.613 (relating to monitoring standards) are not required when a tank is reported to the Department as temporarily removed from service.

(3) Inspection of tanks temporarily removed from service shall be performed in accordance with § 245.616 (relating to inspection requirements).

§ 245.615. Recordkeeping requirements.

(a) The owner/operator shall maintain required storage tank system records. If records are maintained offsite, the records shall be easily obtained and provided to the Department upon request.

(b) The following records shall be maintained for the operational life of the tank unless otherwise stated:

(1) Original tank and system installation records and design specifications. This requirement is limited to records currently available for tank systems existing prior to _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal).

(2) Records of modification to the tank or storage tank system.

(3) Federal and state permits.

(4) Current registration certificates.

(5) Monthly leak detection records and maintenance checklists for the past 12 months.

(6) The last third-party inspection report.

§ 245.616. Inspection requirements.

(a) Required inspections of small aboveground storage tanks shall be conducted by Department certified aboveground storage tank inspectors according to a current Nationally recognized association's code of practice such as API and ASME and according to manufacturer's specifications. Deficiencies noted during the inspection shall be addressed.

(b) After _____ (*Editor's Note*: The blank refers to the effective date of the adoption of this proposal), small aboveground field constructed storage tanks shall be inspected at installation, reconstruction or relocation and when a major modification activity is performed on the tank shell or the tank bottom plates.

(c) The owner/operator of small aboveground storage tanks storing regulated petroleum products with a capacity greater than 5,000 gallons and owner/operator of small aboveground storage tanks storing regulated hazardous substances with a capacity greater than 1,100 gallons shall have in-service inspections conducted every 10 years or at 1/4 of the corrosion rate life with a maximum of 10 years between inspections. Inspections shall be phased in for tanks without a previous inspection as follows:

(1) New tanks shall be initially inspected within 10 years of installation.

(2) Existing tanks, less than 10 years old without a previous inspection, shall be inspected by _____ (*Editor's Note*: The blank refers to a date 5 years after the effective date of the adoption of this proposal) or 10 years from the date of installation, whichever is greater.

(3) Existing tanks over 10 years old, without a previous inspection, shall be inspected by _____ (*Editor's Note*: The blank refers to a date 3 years after the effective date of the adoption of this proposal).

(d) In-service inspections shall evaluate the following:

(1) Containment areas.

(2) Foundation and tank supports.

(3) Tank shell and tank roof, where a roof exists.

(4) Appurtenances.

(5) Ancillary equipment including piping.

(6) Leak detection method, including monthly leak detection records and maintenance checklists.

(7) Cathodic protection system, if installed.

(8) Coatings and protections from deteriorations.

[Pa.B. Doc. No. 96-1083. Filed for public inspection June 28, 1996, 9:00 a.m.]