

# Regulatory Analysis Form

(Completed by Promulgating Agency)

## ***INDEPENDENT REGULATORY REVIEW COMMISSION***

(All Comments submitted on this regulation will appear on IRRC's website)

(1) Agency  
Environmental Protection

(2) Agency Number:

Identification Number: 7-530

IRRC Number:

(3) PA Code Cite: 25 Pa. Code Chapter 245

(4) Short Title: Administration of the Storage Tank and Spill Prevention Program

(5) Agency Contacts (List Telephone Number and Email Address):

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(6) Type of Rulemaking (check applicable box):

Proposed Regulation

Final Regulation

Final Omitted Regulation

Emergency Certification Regulation;

Certification by the Governor

Certification by the Attorney General

(7) Briefly explain the regulation in clear and nontechnical language. (100 words or less)

These proposed amendments to 25 Pa. Code Chapter 245 strengthen the underground storage tank (UST) requirements by increasing the emphasis on properly operating and maintaining equipment in accordance with recent federal regulatory requirements. Currently, UST owners and operators are required to have spill prevention, overflow prevention, and release detection equipment in place but are not required to periodically verify the functionality of some of that equipment. This proposal also adds a new certification category that is to be limited to the performance of minor modifications of UST systems. Due to a history of non-compliance, these amendments propose to shorten the in-service inspection cycle for aboveground storage tanks (ASTs) in underground vaults and small ASTs. With the last comprehensive rulemaking occurring nearly 10 years ago, the program will also look to address a number of areas of Chapter 245 that have lacked clarity, or simply need correction.

(8) State the statutory authority for the regulation. Include specific statutory citation.

The proposed rulemaking 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 governing ASTs and USTs to accomplish the purposes and carry out the provisions of the act; section 301 of the act (35 P.S. § 6021.301), which authorizes the Department of Environmental Protection (Department) to establish program requirements for ASTs; section 501 of the act (35 P.S. § 6021.501), which authorizes the Department to establish program requirements for USTs; 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 are necessary for the proper work of the Department.

(9) Is the regulation mandated by any federal or state law or court order, or federal regulation? Are there any relevant state or federal court decisions? If yes, cite the specific law, case or regulation as well as, any deadlines for action.

Comprehensive federal regulations for USTs exist at 40 CFR Part 280. These regulations were initially promulgated in 1988. On July 15, 2015, the first revisions to 40 CFR Part 280 were published in the *Federal Register* as final (80 FR 41566). These changes include: adding secondary containment requirements for new and replaced tanks and piping; adding operator training requirements; adding periodic operation and maintenance requirements for UST systems; removing certain deferrals; adding new release prevention and detection technologies; updating codes of practice; and making editorial and technical corrections. The Department incorporated secondary containment and operator training requirements that meet the current federal requirements into Chapter 245 in 2007 and 2009, respectively, to reflect EPA grant guidelines after the passage of the federal Energy Policy Act of 2005.

On July 15, 2015, the U. S. Environmental Protection Agency (EPA) also updated the state program approval requirements in 40 CFR Part 281. Under these changes, EPA is requiring that states revise their UST regulations and apply for initial or revised state program approval within 3 years of the effective date of the final EPA rule. The effective date of the final EPA rule was October 13, 2015 (90 days after publication in the *Federal Register*). Currently, Pennsylvania has state program approval. Therefore, the Department will need to revise Chapter 245 to be no less stringent than the federal requirements and apply for revised state program approval by October 13, 2018. In states that do not have state program approval and in Native American territories, the EPA regulations took effect on October 13, 2015. EPA has not established a companion federal AST program.

Failure to revise Chapter 245 and apply for revised state program approval could jeopardize receipt of future federal funding and result in the rescission of state program approval. Pennsylvania receives federal funding under Section 9014 of the Solid Waste Disposal Act (42 U.S.C. § 6991m) in the form of the Leaking Underground Storage Tank Prevention and Leaking Underground Storage Tank Cleanup grant. Under both grants, Pennsylvania currently receives approximately \$2.3 million annually from EPA.

(10) State why the regulation is needed. Explain the compelling public interest that justifies the regulation. Describe who will benefit from the regulation. Quantify the benefits as completely as possible and approximate the number of people who will benefit.

Since the beginning of the UST program, preventing petroleum and hazardous substance releases from UST systems into the environment has been one of the primary goals of the program. Although EPA and our state partners have made significant progress in reducing the number of new releases, approximately 5,600 releases were discovered nationwide for the federal fiscal year that ended September 30, 2016. In comparison, using the same parameters (underground storage tank system releases only and October 1, 2015 through September 30, 2016), Pennsylvania had 209 confirmed releases. Lack of proper operation and maintenance of UST systems is the main cause of new releases. Information on sources and causes of releases shows that releases from tanks are less common than they once were. However, releases from piping and spills and overfills associated with deliveries have emerged as more common problems. In addition, releases at the dispenser are one of the leading sources of releases. Finally, data show that release detection equipment is only detecting approximately

50 percent of releases it is designed to detect. These problems are partly due to improper operation and maintenance.

The primary purpose of these amendments is to strengthen the UST requirements by increasing the emphasis on properly operating and maintaining equipment. These revisions require that UST equipment be operated and maintained properly, which will help to further reduce the number of releases from USTs and in turn protect public health and the environment. Incorporation of these UST revisions into Chapter 245 will enable Pennsylvania to retain state program approval from EPA and remain eligible for continued substantial federal funding for the UST program.

A substantial portion of the beneficial impacts associated with this proposed rulemaking are avoided cleanup costs as a result of preventing releases and reducing the severity of releases from USTs. EPA, in the analysis of the potential benefits associated with their final UST regulation, which became effective on October 13, 2015, estimated the typical cost of a small-extent, soil-only remediation to be \$25,300, and the typical cost of a large-extent, groundwater-contamination remediation to be \$428,200. These costs are in 2008 dollars. During calendar year 2016, the average cost per closed claim paid by the Underground Storage Tank Indemnification Fund (USTIF) was \$360,807, and the total paid for all claims was \$31,672,157.

While not able to be quantified, a decrease in release frequency and severity is expected to result in both a reduction of the average cost per closed claim and the total annual claim payments made by the USTIF. This is because groundwater contamination incidents and vapor intrusion remediation costs could be avoided. This in turn will have a positive impact on the health of the USTIF and further decrease the unfunded liability of the USTIF for future claim payments. In addition, capacity and throughput fees paid by UST owners into the USTIF would not have to be increased and could potentially decrease over time. Throughput fees paid by UST owners are typically passed on to the public at motor fuel retail locations.

The Department was unable to quantify or monetize other benefits associated with a decrease in release frequency and severity, including avoidance of human health risks, protection of ecological receptors, protection of gallons of groundwater each year, and avoided property devaluation.

This rulemaking proposes to add a new UST certification category (Underground storage tank system minor modification (UMI)) to allow individuals to perform tank handling activities such as repairs that do not involve excavation without having to obtain the (full) certification (Underground storage tank system installation and modification (UMX)) to install and modify storage tank systems, and to perform tests of UST systems required by this proposed rulemaking. Creation of this new certification category will afford UST owners with the opportunity to employ individuals who specialize in modifications only. Hiring UMI-certified individuals as opposed to UMX-certified individuals could potentially save UST owners some of the costs associated with minor modification and system testing work. The UMI certification category will also provide opportunities for existing certified companies to employ individuals who specialize in minor modification work. In addition, persons interested in only performing “minor modification” work can become certified and establish their own company. In either case, the establishment of this new certification category is expected to mean the creation of a significant number of jobs within the certified installer community.

Lastly, these proposed amendments would require all ASTs in underground vaults that require an in-service inspection to be inspected within 6 and 12 months of installation and at least every 3 years thereafter due to their history of non-compliance. This mirrors the inspection requirement for USTs.

Also, the initial inspection requirement and in-service inspection cycle for small ASTs would be shortened from 10 years to 5 years. Based on current in-service inspections, the compliance rate with regulatory requirements is less than 50%. The Department shortened the facility operations inspection cycle for USTs from 5 years to 3 years in a prior rulemaking which has resulted in increased regulatory compliance. Increased compliance with regulatory requirements means less Department staff time needed to follow-up on non-compliant facilities, fewer releases and a reduction in the severity of releases from ASTs.

(11) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

Nearly all the provisions in this proposed rulemaking are consistent with the revisions to the federal UST regulations in 40 CFR Part 280 that took effect on October 13, 2015. EPA has no companion federal AST regulations.

Subsection 245.306(e) is proposed to be added to require a responsible party to notify the Department by telephone or electronic mail as soon as practicable, but no later than 24 hours, after the initiation of interim remedial actions. For releases associated with USTs, 40 CFR § 280.62 of the federal regulations does not require the initiation of initial abatement measures to be reported. However, § 280.62(b) does require a report to be submitted within 20 days after release confirmation summarizing the initial abatement steps taken. This requirement is not proposed to be added, but it is imperative that the Department be aware that interim remedial actions are initiated. If the Department has not been notified that interim remedial actions are being undertaken following a release, the Department can contact the facility owner to assure that this requirement is being met. These initial corrective actions are extremely important in limiting the complexity of the release, the amount of corrective action that must be undertaken, and the ultimate cost of the corrective action.

Subsection 245.309(c)(24) is proposed to be added and would require the responsible party to notify the Department by telephone or electronic mail as soon as practicable, but no later than 24 hours, after the initiation of site characterization activities. Concurrent with the implementation of interim remedial actions, site characterization activities are to be initiated. This provision would assure the Department that responsible parties are proceeding with the required site characterization tasks. Too often, responsible parties delay the implementation of site characterization activities and find themselves requesting an extension to submit the site characterization report. It is believed that this proposal would have responsible parties immediately on track to complete the site characterization and result in significantly fewer site characterization report extension requests being submitted to the Department. The federal requirements at 40 CFR Part 280 do not include such a provision. However, § 280.63(b) and § 280.64(d) do require that owners and operators submit an initial site characterization report and a free product removal report within 45 days of release confirmation, respectively. This federal requirement is not proposed to be added to Chapter 245.

The definition of “Underground storage tank” is proposed for revision to be consistent with the federal definition contained in 40 CFR § 280.12. In revising the definition of “Underground storage tank,” the exclusion for “Tanks containing radioactive materials or coolants that are regulated under The Atomic Energy Act of 1954 (42 U.S.C.A. §§ 2011—2297),” and “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)” would be deleted. The exclusion for “A wastewater treatment tank system” is proposed to be revised to read “A wastewater treatment tank system that is part of a wastewater

treatment facility regulated under Section 307(b) or 402 of the Clean Water Act.” EPA has always regulated these UST systems and owners and operators have been required to comply with requirements for interim prohibition and release response and corrective action (40 CFR Part 280, Subparts A and F) since the effective date of the 1988 federal UST regulation. In its final rulemaking promulgated in 2015, EPA maintained its position that these regulated USTs only need to comply with Subparts A and F. The Department currently excludes these UST systems from regulation but is now proposing to regulate these USTs. In doing so, the Department is proposing in § 245.403(c) that these USTs would need to meet the same requirements that all other regulated UST systems must meet. However, with regard to Subchapter E (relating to technical standards for underground storage tanks), these UST owners will not need to comply with §§ 245.411, 245.421(b)(3), 245.421(b)(4)(ii)-(iii), 245.422(d), 245.432(g), and 245.436 – 245.446. These UST owners will not be required to conduct facility inspections, install spill and overfill prevention equipment, check for water in petroleum storage tanks, implement operator training, conduct periodic operation and maintenance walkthrough inspections, and perform release detection. However, the Department believes that it is important for owners of these USTs to register the USTs, utilize DEP-certified installers and inspectors, and maintain financial responsibility. In addition, specifically with regard to Subchapter E, provisions concerning variances, applicable codes and standards, performance standards for new UST systems, upgrade requirements for existing UST systems, reuse of removed USTs, spill and overfill control, operation and maintenance including corrosion protection, compatibility, repairs allowed, reporting and recordkeeping, and closure, are proposed to apply to these UST systems.

With regard to subsection 245.421(b)(3)(i)(B)(III), this subsection is proposed for deletion. In 1991, EPA finalized a minor technical amendment to the federal UST regulations (Section 280.20(c)(1)(ii)(C)) allowing this alternative overfill prevention equipment to be utilized closer to the tops of larger tanks if it was able to be done in a manner that achieved certain minimum levels of performance. Since this overfill prevention equipment option is proposed for deletion, it can be viewed as being more stringent than EPA requirements. This overfill prevention equipment option is proposed to be deleted as there is no known testing procedure to adequately evaluate the effectiveness of this equipment. While EPA did not delete this equipment option from its recent rulemaking, EPA is also not aware of an adequate testing procedure. Further, Department records indicate that there are no facilities that utilize this method of overfill prevention. The Department is interested in hearing public comment as to whether there are known facilities that utilize this particular overfill prevention method, and if so, what testing procedure is utilized to evaluate the effectiveness of the equipment.

Subsection 245.434(5)(ii) is proposed for deletion. This subsection states that the repaired portion of the UST system can be monitored monthly for releases in lieu of tightness testing. The proposal is more stringent than the federal requirement at 40 CFR § 280.33(d)(2) (relating to repairs allowed) as EPA allows this option in lieu of tightness testing. The fact is that most manufacturer’s specifications and nationally-recognized codes of practice call for tightness testing of the UST system to determine competency prior to placing product in the UST system.

(12) How does this regulation compare with those of the other states? How will this affect Pennsylvania’s ability to compete with other states?

On July 15, 2015, EPA revised the federal UST program requirements in 40 CFR Part 280. At the same time, EPA also updated the state program approval requirements in 40 CFR Part 281. Under these changes, EPA is requiring that states revise their UST regulations and apply for initial or revised state program approval by October 13, 2018. Currently, Pennsylvania has state program approval. Therefore, the Department, along with all other states seeking initial or revised state program approval,

will need to revise their UST program regulations to be no less stringent than the federal requirements. In states that do not have state program approval, the revised EPA regulations took effect on October 13, 2015. Therefore, in general, all states will have the same UST program requirements. EPA has no companion federal AST program. Pennsylvania's AST program was developed and based strictly on the authorities provided for in the act. For these reasons, this proposed rulemaking will not put the Commonwealth or the regulated community at a competitive disadvantage with other states.

(13) Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

The proposed rulemaking will not affect any other existing regulations of the Department or any regulations promulgated by other state agencies.

(14) Describe the communications with and solicitation of input from the public, any advisory council/group, small businesses and groups representing small businesses in the development and drafting of the regulation. List the specific persons and/or groups who were involved. ("Small business" is defined in Section 3 of the Regulatory Review Act, Act 76 of 2012.)

The Department worked with the Storage Tank Advisory Committee (STAC) during development of this proposed rulemaking. The 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 of the act, the STAC has been given the opportunity to review and comment on the draft proposed annex. Initially, STAC members were provided with the opportunity to review Department concepts and present concepts that they would like to see incorporated into Chapter 245. This occurred at the December 8, 2015, and June 7, 2016, meetings. The STAC was also afforded the opportunity to review and discuss draft proposed regulatory language at the December 6, 2016, and March 7, 2017, meetings. On March 7, 2017, the STAC voted to unanimously support the amendments and recommended that the Board consider the amendments for publication as proposed rulemaking. The STAC chairperson, John Arnold, subsequently prepared a written report to the Board on the proposed rulemaking. A listing of STAC members and minutes of STAC meetings are available on the Department's website at <http://www.dep.pa.gov/>. The Citizens Advisory Council was kept apprised of developments in the regulatory process every month.

(15) Identify the types and number of persons, businesses, small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012) and organizations which will be affected by the regulation. How are they affected?

The proposed rulemaking would affect approximately 7,100 storage tank owners at over 12,600 storage tank facilities. Industry sectors potentially affected by the proposed rulemaking include retail motor fuel sales, commercial, institutional, manufacturing, transportation, communications and utilities, and agriculture. Federal, state and local government operations would also be affected.

All 7,772 UST facilities would be affected by the periodic walkthrough inspections. At a minimum of every 30 days, spill prevention and release detection equipment must be checked. However, spill prevention equipment associated with UST systems receiving deliveries at intervals greater than every 30 days, may be checked prior to each delivery. Containment sumps and handheld release detection equipment must be checked a minimum of every 12 months.

All 22,456 UST would be affected by the overfill prevention equipment inspections. All UST systems have overfill prevention equipment. Overfill prevention equipment is to be evaluated at least once every three years to ensure that the equipment is set to activate at the correct level and will activate when the regulated substance stored reaches that level.

All 22,456 UST systems would be affected by the spill prevention equipment tests. Spill prevention equipment is to be tested once every three years to ensure the equipment is liquid-tight.

Thirty-nine percent or 8,835 UST systems would be affected by the containment sump testing requirement. Containment sump testing is only required when the containment sump is used for interstitial monitoring of piping. Containment sump testing is to be conducted once every three years to ensure the equipment is liquid-tight.

This proposed rulemaking prohibits flow restrictors (ball float valves) as an option for overfill prevention when these devices need to be replaced. A total of 3,588 UST systems are reported to have ball float valves as the current form of overfill prevention and will be affected by this requirement.

All 22,456 UST systems would be affected by the annual operability testing of electronic and mechanical components of release detection equipment. The required tests shall apply to automatic tank gauges and other controllers, probes and sensors, automatic line leak detectors, vacuum pumps and pressure gauges, and hand-held electronic sampling equipment associated with groundwater and vapor monitoring.

The removal of the release detection deferral for emergency generator tanks would only affect 629 or 2.8 percent of the UST systems.

The number of UST systems that would be affected by the removal of the regulatory deferral by EPA for field-constructed tanks is unknown. However, this would only affect existing underground field-constructed storage tanks installed on or before October 11, 1997, that are currently exempt from regulation under Chapter 245 in accordance with Department technical guidance titled, "Policy for Existing Field-Constructed Hazardous Substance Underground Storage Tanks at Facilities Regulated under the Safe Drinking Water Act."

Wastewater treatment tank systems subject to regulation under Section 402 or 307(b) of the Clean Water Act would remain excluded from regulation under Chapter 245.

The number of UST systems that would be affected by the removal of the regulatory exclusion for USTs containing radioactive material and emergency generator UST systems at nuclear power generation facilities regulated by the Nuclear Regulatory Commission is not known. Since owners and operators of these UST systems had to meet federal UST regulations dating back to 1988 that require systems to be designed and constructed to prevent releases during the operating life of the facility due to corrosion or structural failure, these systems may already be in compliance.

The Department is aware of 31 AST systems in underground vaults that would be affected by the requirement to have an in-service inspection conducted within 6 and 12 months of installation and at least every 3 years thereafter.

The Department has 6,847 small AST systems registered that would be affected by the shortened initial inspection requirement and in-service inspection cycle from 10 years to 5 years.

(16) List the persons, groups or entities, including small businesses, that will be required to comply with the regulation. Approximate the number that will be required to comply.

There are approximately 7,100 storage tank owners who would be directly affected and required to comply with the regulation. In general, industry sectors potentially affected by the proposed rulemaking include retail motor fuel sales, commercial, institutional, manufacturing, transportation, communications and utilities, and agriculture. Federal, state and local government operations would also be affected. Retail motor fuel sales is the industry sector most impacted by these regulations. For the most part, these are gasoline stations with convenience stores and other gasoline stations. Other specific entities and groups affected include: wholesale trade; retail trade; accommodation; food services; hospitals; refineries; chemical manufacturers; air, water, truck, transit, pipeline and airport operations; wired telecommunications carriers; electric power generation, transmission and distribution, crop and animal production, volunteer fire companies, and emergency medical service organizations.

Department-certified storage tank installers, inspectors and companies would also be required to comply with this proposed rulemaking. At the current time, there are nearly 900 certified individuals and approximately 350 certified companies.

Responsible parties as currently defined are responsible for complying with the proposed rulemaking in terms of the corrective action provisions contained in Subchapter D. Responsible parties include the tank owners and operators, landowners and occupiers, and product distributors.

(17) Identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor communities and other public and private organizations. Evaluate the benefits expected as a result of the regulation.

In general, the proposed UST regulatory requirements focus on additional testing and inspection of existing equipment, and do not reflect large-scale investments in equipment or significant changes to operations at the facility level. The same can be said of the proposed AST regulatory requirements which focus on an increased inspection frequency for small ASTs and ASTs in vaults. The only exception are the one-time costs to replace all ball float valves with alternate overfill prevention equipment and to add release detection to those emergency generator USTs that were previously deferred from regulation. However, these one-time costs apply to a limited number of UST systems. Currently, there are only 3,588 UST systems that have ball float valves for overfill prevention and 629 emergency generator UST systems that are without a form of release detection. Further, ball float valves will only be required to be replaced when they fail.

It is important to note that the Department needs to revise Chapter 245 to be no less stringent than the federal requirements for USTs in order to retain state program approval. If Chapter 245 was not revised, the Department would lose state program approval and EPA would then implement the UST program in the Commonwealth. Therefore, the increased costs for UST facilities detailed below would occur even if Chapter 245 was not revised due to EPA's revised regulations for USTs at 40 CFR Part 280.

The primary purpose of these amendments is to strengthen the UST requirements by increasing the emphasis on properly operating and maintaining equipment. These revisions require that UST equipment be operated and maintained properly, which will help to further reduce the number of releases from USTs and in turn protect public health and the environment. Incorporation of these UST revisions into Chapter 245 will enable Pennsylvania to retain state program approval from EPA and remain eligible for continued substantial federal funding for the UST program.



A substantial portion of the beneficial impacts associated with this proposed rulemaking are avoided cleanup costs as a result of preventing releases and reducing the severity of releases from USTs. EPA, in the analysis of the potential benefits associated with their final UST regulation, which became effective on October 13, 2015, estimated the typical cost of a small-extent, soil-only remediation to be \$25,300, and the typical cost of a large-extent, groundwater-contamination remediation to be \$428,200. These costs are in 2008 dollars. During calendar year 2016, the average cost per closed claim paid by the USTIF was \$360,807, and the total paid for all claims was \$31,672,157.

While not able to be quantified, a decrease in release frequency and severity is expected to result in both a reduction of the average cost per closed claim and the total annual claim payments made by the USTIF. This is because groundwater contamination incidents and vapor intrusion remediation costs could be avoided. This in turn will have a positive impact on the health of the USTIF and further decrease the unfunded liability of the USTIF for future claim payments. In addition, capacity and throughput fees paid by UST owners into the USTIF would not have to be increased and could potentially decrease over time. Throughput fees paid by UST owners are typically passed on to the public at motor fuel retail locations.

The Department was unable to quantify or monetize other benefits associated with a decrease in release frequency and severity, including avoidance of human health risks, protection of ecological receptors, protection of gallons of groundwater each year, and avoided property devaluation.

This rulemaking proposes to add a new UST certification category (Underground storage tank system minor modification (UMI)) to allow individuals to perform tank handling activities such as repairs that do not involve excavation without having to obtain the (full) certification (Underground storage tank system installation and modification (UMX)) to install and modify storage tank systems, and to perform tests of UST systems required by this proposed rulemaking. Creation of this new certification category will afford UST owners with the opportunity to employ individuals who specialize in modifications only. Hiring UMI-certified individuals as opposed to UMX-certified individuals could potentially save UST owners some of the costs associated with minor modification and system testing work. The UMI certification category will also provide opportunities for existing certified companies to employ individuals who specialize in minor modification work. In addition, persons interested in only performing “minor modification” work can become certified and establish their own company. In either case, the establishment of this new certification category is expected to mean the creation of a significant number of jobs within the certified installer community. This in turn may help to drive down the cost of UST system testing.

Lastly, these proposed amendments would require all ASTs in underground vaults that require an in-service inspection to be inspected within 6 and 12 months of installation and at least every 3 years thereafter due to their history of non-compliance. This mirrors the inspection requirement for USTs. Also, the initial inspection requirement and in-service inspection cycle for small ASTs will be shortened from 10 years to 5 years. Based on current in-service inspections, the compliance rate with regulatory requirements is less than 50%. The Department shortened the facility operations inspection cycle for USTs from 5 years to 3 years in a prior rulemaking which has resulted in increased regulatory compliance. Increased compliance with regulatory requirements means less Department staff time needed to follow-up on non-compliant facilities, fewer releases and a reduction in the severity of releases from ASTs.

(18) Explain how the benefits of the regulation outweigh any cost and adverse effects.

Since the beginning of the UST program, preventing petroleum and hazardous substance releases from UST systems into the environment has been one of the primary goals of the program. Although EPA and our state partners have made significant progress in reducing the number of new releases, approximately 5,600 releases were discovered nationwide for the federal fiscal year that ended September 30, 2016. In comparison, using the same parameters (underground storage tank system releases only and October 1, 2015 through September 30, 2016), Pennsylvania had 209 confirmed releases. Lack of proper operation and maintenance of UST systems is the main cause of new releases. Information on sources and causes of releases shows that releases from tanks are less common than they once were. However, releases from piping and spills and overfills associated with deliveries have emerged as more common problems. In addition, releases at the dispenser are one of the leading sources of contamination at UST facilities. Finally, data show that release detection equipment is only detecting approximately 50 percent of releases it is designed to detect. These problems are partly due to improper operation and maintenance.

Through increased emphasis on properly operating and maintaining UST equipment as proposed by this rulemaking, on-going problems with release detection practices and routine operation and maintenance will significantly improve. In time, this will result in a higher rate of UST facility compliance with regulatory requirements and fewer releases of regulated substances in the Commonwealth. Last year, the USTIF paid nearly \$32 million on cleanup of releases from USTs. The projected annual cost of these UST amendments is insignificant compared to the cost of cleanup of released regulated substances. Further, the Department stands to lose approximately \$2.3 million annually in federal LUST Trust Fund Prevention and Cleanup grant funds if it fails to implement an UST program that meets the federal requirements.

With regard to the AST program, an increased inspection frequency is needed for all ASTs in underground vaults and small ASTs due to their history of non-compliance. Based on current in-service inspections, the compliance rate with regulatory requirements is less than 50%. The Department shortened the facility operations inspection cycle for USTs from 5 years to 3 years in a prior rulemaking which has resulted in increased regulatory compliance. Increased compliance with regulatory requirements means less Department staff time needed to follow-up on non-compliant facilities, fewer releases and a reduction in the severity of releases from ASTs.

(19) Provide a specific estimate of the costs and/or savings to the **regulated community** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

In general, the proposed UST and AST regulatory requirements focus on additional testing and inspection of existing equipment and do not require large-scale investments in equipment or significant changes to operations at the facility level. The only exception are the one-time costs to replace ball float valves following failure of the overfill prevention evaluation with alternate overfill prevention equipment and to add release detection to those emergency generator USTs that were previously deferred from regulation. However, these one-time costs apply to a limited number of UST systems. Currently, there are only 3,588 UST systems that have ball float valves for overfill prevention and 629 emergency generator UST systems that are without a form of release detection.

It is important to note that the Department needs to revise Chapter 245 to be no less stringent than the federal requirements for USTs in order to retain state program approval. If Chapter 245 was not revised,

the Department would lose state program approval and EPA would then implement the UST program in the Commonwealth. Therefore, the increased costs for UST facilities detailed below would occur even if Chapter 245 was not revised due to EPA’s revised regulations for USTs at 40 CFR Part 280.

For purposes of determining compliance costs for the proposed UST regulatory requirements, this analysis assumes that the typical UST facility consists of:

- 3 UST systems, each UST is 10,000 gallon capacity, 2 USTs store gasoline, 1 UST stores diesel
- 1 piping run of 100-foot length per UST system
- 1 fill port per UST system
- 1 spill prevention equipment per UST system
- 2 drop tube shut-off devices and 1 ball float valve for overfill prevention equipment
- 4 dispensers each with an under-dispenser containment sump
- 1 submersible turbine pump sump/tank top sump per UST system
- 1 automatic tank gauge (ATG) per facility with each UST system having an ATG probe

The Department reached out to five Department-certified companies from various sectors of the Commonwealth to determine an estimated cost for the various requirements of this proposed rulemaking based on a typical UST facility. Where costs are presented on a facility basis, the costs were adjusted for the fact that each UST facility has on average 2.89 UST systems. There are 7,772 UST facilities and 22,456 UST systems statewide.

EPA’s state program approval requires a walkthrough inspection of UST facilities which involves a visual inspection of spill prevention equipment and release detection every 30 days and a visual inspection of containment sumps and handheld release detection devices annually. All 7,772 UST facilities will require 30-day walkthrough inspections. There are only 5,817 UST facilities that have containment sumps and will require the annual inspection. These inspections can be performed by the UST owner, operator, or other employee of the UST owner resulting in no cost other than the necessary time to conduct the inspections. However, some UST owners may choose to utilize third-party companies to conduct the walkthrough inspections. If a UST owner chose to hire a third party company, the owner would incur costs. However, this action would be voluntary and is not required by the proposed regulations.

Testing of spill prevention equipment and containment sumps and inspection of overfill prevention equipment at UST facilities are required every 3 years. All 22,456 UST systems have overfill prevention equipment and will require inspection. Likewise, all UST systems will require spill prevention equipment tests. Thirty-nine percent, or 8,835 UST systems at 3,245 UST facilities, have containment sumps used for interstitial monitoring of piping and will need to be tested. These tests and inspections must be conducted by appropriate Department-certified individuals to include completion of Department-provided forms. The cost range and average cost for each inspection or test per facility on an annual basis are summarized in the table below:

<b>Inspection or Test</b>	<b>Range of Costs</b>	<b>Average Annual Cost</b>
Overfill Prevention Equipment	\$96 - \$161	\$112
Spill Prevention Equipment	\$88 - \$209	\$127
Containment Sump	\$257 - \$899	\$546

Based on the average cost, the annualized cost to a UST facility owner for this every-3-year requirement is estimated to range from \$239 - \$785. The lower cost is for a facility that does not have containment sumps used for interstitial monitoring of piping. Based on the average cost, the annualized cost to inspect and test equipment at all UST facilities is estimated to be \$3,629,278.

This proposed rulemaking would prohibit flow restrictors (ball float valves) as an option for overflow prevention when these devices need to be replaced. A total of 3,588 UST systems are reported to have ball float valves as the form of overflow prevention. The increased cost to repair a ball float valve or replace a ball float valve with the same versus providing another form of overflow prevention (e.g. shut-off device or alarm) is estimated to range from \$975 - \$1,100 with the average cost to be \$1,038. The average cost represents the one-time increased cost to a UST owner for this overflow prevention equipment replacement. Replacement of a ball float valve would only be necessary when the equipment no longer functions as originally designed and fails the 3-year overflow evaluation requirement. Based on the average cost, the total one-time increased cost to replace ball float valves with another form of overflow prevention for all UST systems is estimated to be \$3,724,344.

Annual release detection equipment testing would be required by this proposed rulemaking for all 22,456 UST systems. Operability tests will need to be conducted of the electronic and mechanical components of release detection equipment. The annualized cost to a UST facility owner for this release detection testing requirement is estimated to range from \$337 - \$1,036, with the average cost to be \$592. Based on the average cost, the annual cost to test release detection equipment at all UST facilities is estimated to be \$4,601,024. These costs are based on an average underground storage tank facility consisting of three UST systems and four dispensers. Facilities that have fewer UST systems are expected to have lower costs.

This proposed rulemaking would require release detection for emergency generator USTs. Previously, emergency generator USTs were deferred from having to meet release detection requirements. There are an estimated 629 UST systems that are reported as not having any form of release detection. It is assumed that UST owners will utilize an ATG as the form of release detection for these systems, however, other lower cost methods of tank release detection could be chosen by the UST owner depending on type and location of UST system. The addition of these systems will also require annual operability tests to be conducted. The cost for the operability tests for these systems are included in the paragraph above pertaining to release detection equipment testing. The cost for the addition of an ATG ranges from \$4,000 - \$30,000 with the average estimated cost to be \$16,875. Cost estimates are dependent on several factors including amount of excavation required to install wiring and conduit, access to the UST system and location of the UST system to utilities and buildings. The average cost represents the one-time cost to a UST owner to add an ATG for release detection. Based on the average cost, the total one-time cost to add release detection to those emergency generator USTs that were previously deferred is estimated to be \$10,614,375.

The table below summarizes all increased costs as a result of the proposed UST regulatory requirements assuming UST owners, operators, or other employees of the UST owner conduct all walkthrough inspections:

	Annualized O&M <sup>1</sup> Costs <sup>2</sup>	One-Time Costs <sup>3</sup>	Number of Potentially Affected Facilities/Systems	Total Annualized O&M <sup>1</sup> Costs <sup>4</sup>	Total One-Time Costs <sup>5</sup>
Walkthrough inspections	\$0	\$0	7,772 facilities	\$0	\$0
Periodic testing/inspection of: overfill prevention equipment, spill prevention equipment, and containment sumps <sup>6</sup>	\$239 - \$785	\$0	7,772 facilities	\$3,629,278	\$0
Eliminate ball float valves when overfill prevention equipment is replaced	\$0	\$1,038	3,588 UST systems	\$0	\$3,724,344
Operability tests for release detection	\$592	\$0	7,772 facilities	\$4,601,024	\$0
Remove release detection deferral for emergency generator USTs	\$0	\$16,875	629 UST systems	\$0	\$10,614,375
	\$831 - \$1,377			\$8,230,302	\$14,338,719

<sup>1</sup> Operation and Maintenance.

<sup>2</sup> Per UST facility.

<sup>3</sup> Per UST system. One-time costs do not apply to all UST systems.

<sup>4</sup> For all UST facilities.

<sup>5</sup> For all UST systems. One-time costs do not apply to all UST systems.

<sup>6</sup> The lower range of the annualized O&M costs is for facilities that do not have containment sumps used for interstitial monitoring of piping.

The annualized increased operation and maintenance (O&M) costs to conduct walkthrough inspections, inspect overfill prevention equipment, test spill prevention equipment and containment sumps, and test release detection equipment per UST facility is estimated to range from \$831 - \$1,377. The total annualized increased costs for these inspections and tests at all UST facilities are estimated to be \$8,230,302.

The total one-time costs to replace all ball float valves with alternate overfill prevention equipment and to add release detection to those emergency generator USTs that were previously deferred is estimated to be \$14,338,719. These one-time costs apply to a limited number of UST systems. Currently, less than 16% of all UST systems have ball float valves for overfill prevention and less than 3% of all UST systems are emergency generator USTs. Owners of emergency generator UST systems will be afforded one to two years under this proposal to make an informed decision to either add the necessary release detection, close the UST system, or close the UST system and install a new AST.

The proposed AST regulatory requirements focus on an increased inspection frequency for small ASTs and ASTs in vaults. As with the proposed UST regulatory requirements, the Department reached out to five Department-certified companies from various sectors of the Commonwealth to determine an estimated increased cost to AST owners for the increased inspection frequencies.

This proposed rulemaking would require all ASTs in underground vaults that require an in-service inspection to be inspected within 6 to 12 months of installation and at least every 3 years thereafter. ASTs with a capacity greater than 5,000 gallons, and ASTs storing highly hazardous substances with a capacity greater than 1,100 gallons, are subject to this requirement.

The frequency of in-service inspections on large ASTs in underground vaults is proposed to increase from once every 5 years to once every 3 years. At the current time, there are no large ASTs in underground vaults registered with the Department. The in-service inspection frequency on small ASTs in underground vaults is proposed to increase from once every 10 years to once every 3 years.

Currently, the reported cost range and average cost for an in-service inspection of a vaulted AST on an annual basis is \$78 to \$315, and \$179, respectively. The average size of a vaulted AST is approximately 9,800 gallons. Under this proposal, the cost range and average cost for an in-service inspection of a vaulted AST on an annual basis is estimated to be \$260 to \$1,050, and \$595, respectively. Based on the average cost, the annualized increased cost to an AST owner of a vaulted AST for an in-service inspection is estimated to be \$416.

The number of AST systems in underground vaults subject to this requirement is estimated to be 31. The total annualized increased cost to all AST owners subject to this proposed requirement is estimated to be \$12,896.

This proposal would also shorten the initial inspection requirement and in-service inspection cycle for small ASTs (other than small ASTs in underground vaults) from 10 years to 5 years. The number of small ASTs subject to this requirement includes ASTs with a capacity greater than 5,000 gallons, and ASTs storing highly hazardous substances with a capacity greater than 1,100 gallons. Currently, the reported cost range and average cost for an in-service inspection of a small AST on an annual basis is \$44 to \$200, and \$98, respectively. The average size of a small AST is approximately 11,500 gallons. Under this proposal, the cost range and average cost for an in-service inspection of a small AST on an annual basis is estimated to be \$88 to \$400, and \$196, respectively. Based on the average cost, the annualized increased cost to an AST owner of a small AST is estimated to be \$98.

The number of small ASTs subject to this requirement is estimated to be 6,847. The total annualized increased cost to all AST owners subject to this proposed requirement is estimated to be \$671,006.

The table below summarizes all increased costs as a result of the proposed AST regulatory requirements:

	Annualized O&M Costs	One-Time Costs	Number of Potentially Affected Systems	Total Annualized O&M Costs	Total One-Time Costs
Increased inspection frequency for vaulted ASTs	\$416	\$0	31 AST systems	\$12,896	\$0
Increased inspection frequency for small ASTs	\$98	\$0	6,847 AST systems	\$671,006	\$0
		\$0		\$683,902	\$0

Costs associated with the removal of the regulatory deferral by EPA for UST systems which are field constructed, and the removal of the regulatory exclusion for “Tanks containing radioactive materials or

coolants that are regulated under The Atomic Energy Act of 1954 (42 U.S.C.A. §§ 2011—2297),” “A wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 307(b) or 402 of the Clean Water Act (underlined language is proposed in this rulemaking)” and “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)” are not included in this analysis.

Under this Chapter, field-constructed USTs installed after October 11, 1997, were always regulated. This proposed rulemaking adds only existing field-constructed USTs installed on or before October 11, 1997, to the community of regulated USTs. The number of field-constructed USTs installed on or before October 11, 1997, is not known and will not be known until these USTs are registered with the Department. Registration is required within 30 days after the date of adoption of the final-form rulemaking. These tanks are temporarily excluded from other regulatory requirements of Chapter 245 until one year after the date of adoption of the proposed rulemaking. Upon registration of a UST, the Department will work with the tank owner to determine what is necessary to bring the UST into regulatory compliance. Due to the unique nature of these USTs, the necessary steps to bring the USTs into compliance are expected to vary widely. Thus, it is impossible to estimate the compliance costs associated with the regulation of this universe of USTs.

Wastewater treatment tank systems subject to regulation under Section 402 or 307(b) of the Clean Water Act will remain excluded from regulation under Chapter 245.

USTs containing radioactive material and emergency generator UST systems at nuclear power generation facilities regulated by the Nuclear Regulatory Commission (NRC) are subject to U. S. Department of Energy Orders and NRC regulations that are comparable to the Chapter 245 requirements for new and existing USTs regarding spill and overflow control, operation and maintenance of corrosion protection, and release detection. Since owners and operators of these UST systems had to meet federal UST regulations dating back to 1988 that require systems to be designed and constructed to prevent releases during the operating life of the facility due to corrosion or structural failure, these systems may already be in compliance and therefore incur no additional costs.

A substantial portion of the beneficial impacts associated with this proposed rulemaking are avoided cleanup costs as a result of preventing releases and reducing the severity of releases from USTs. While not able to be quantified, a decrease in release frequency and severity is expected to result in both a reduction of the average cost per closed claim and the total annual claim payments made by the USTIF. This is because groundwater contamination incidents and vapor intrusion remediation costs could be avoided. This in turn will have a positive impact on the health of the USTIF and further decrease the unfunded liability of the USTIF for future claim payments. In addition, capacity and throughput fees paid by UST owners into the USTIF would not have to be increased and could potentially decrease over time. Throughput fees paid by UST owners are typically passed on to the public at motor fuel retail locations. Any decrease in release frequency will result in fewer deductibles being paid by UST owners for corrective action.

The proposed rulemaking does not require legal, accounting or consulting procedures for implementation of the regulation.

(20) Provide a specific estimate of the costs and/or savings to the **local governments** associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

Because local governments own and operate regulated ASTs and USTs, the costs are a subset of the costs to the regulated community.

The table below summarizes all increased costs as a result of the proposed UST regulatory requirements assuming UST owners, operators, or other employees of the UST owner conduct all walkthrough inspections:

	Annualized O&M <sup>1</sup> Costs <sup>2</sup>	One-Time Costs <sup>3</sup>	Number of Potentially Affected Facilities/Systems	Total Annualized O&M <sup>1</sup> Costs <sup>4</sup>	Total One-Time Costs <sup>5</sup>
Walkthrough inspections	\$0	\$0	499 facilities	\$0	\$0
Periodic testing/inspection of: overfill prevention equipment, spill prevention equipment, and containment sumps <sup>6</sup>	\$239 - \$785	\$0	499 facilities	\$186,419	\$0
Eliminate ball float valves when overfill prevention equipment is replaced	\$0	\$1,038	53 UST systems	\$0	\$55,014
Operability tests for release detection	\$592	\$0	499 facilities	\$295,408	\$0
Remove release detection deferral for emergency generator USTs	\$0	\$16,875	66 UST systems	\$0	\$1,113,750
	\$831 - \$1,377			\$481,827	\$1,168,764

<sup>1</sup> Operation and Maintenance.

<sup>2</sup> Per UST facility.

<sup>3</sup> Per UST system. One-time costs do not apply to all UST systems.

<sup>4</sup> For all UST facilities.

<sup>5</sup> For all UST systems. One-time costs do not apply to all UST systems.

<sup>6</sup> The lower range of the annualized O&M costs is for facilities that do not have containment sumps used for interstitial monitoring of piping.

The table below summarizes all increased costs as a result of the proposed AST regulatory requirements:

	Annualized O&M Costs	One-Time Costs	Number of Potentially Affected Systems	Total Annualized O&M Costs	Total One-Time Costs
Increased inspection frequency for vaulted ASTs	\$416	\$0	1 AST systems	\$416	\$0
Increased inspection frequency for small ASTs	\$98	\$0	295 AST systems	\$28,910	\$0
		\$0		\$29,326	\$0



A substantial portion of the beneficial impacts associated with this proposed rulemaking are avoided cleanup costs as a result of preventing releases and reducing the severity of releases from USTs. While not able to be quantified, a decrease in release frequency and severity is expected to result in both a reduction of the average cost per closed claim and the total annual claim payments made by the USTIF. This is because groundwater contamination incidents and vapor intrusion remediation costs could be avoided. This in turn will have a positive impact on the health of the USTIF and further decrease the unfunded liability of the USTIF for future claim payments. In addition, capacity and throughput fees paid by UST owners into the USTIF would not have to be increased and could potentially decrease over time. Any decrease in release frequency will result in fewer deductibles being paid by UST owners for corrective action.

The proposed rulemaking does not require legal, accounting or consulting procedures for implementation of the regulation.

(21) Provide a specific estimate of the costs and/or savings to the **state government** associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.

Because state government owns and operates regulated ASTs and USTs, the costs are a subset of the costs to the regulated community.

The table below summarizes all increased costs as a result of the proposed UST regulatory requirements assuming UST owners, operators, or other employees of the UST owner conduct all walkthrough inspections:

	Annualized O&M <sup>1</sup> Costs <sup>2</sup>	One-Time Costs <sup>3</sup>	Number of Potentially Affected Facilities/Systems	Total Annualized O&M <sup>1</sup> Costs <sup>4</sup>	Total One-Time Costs <sup>5</sup>
Walkthrough inspections	\$0	\$0	218 facilities	\$0	\$0
Periodic testing/inspection of: overfill prevention equipment, spill prevention equipment, and containment sumps <sup>6</sup>	\$239 - \$785	\$0	218 facilities	\$129,634	\$0
Eliminate ball float valves when overfill prevention equipment is replaced	\$0	\$1,038	2 UST systems	\$0	\$2,076
Operability tests for release detection	\$592	\$0	218 facilities	\$129,056	\$0
Remove release detection deferral for emergency generator USTs	\$0	\$16,875	99 UST systems	\$0	\$1,670,625
	\$831 - \$1,377			\$258,690	\$1,672,701

<sup>1</sup> Operation and Maintenance.

<sup>2</sup> Per UST facility.

<sup>3</sup> Per UST system. One-time costs do not apply to all UST systems.

<sup>4</sup> For all UST facilities.

<sup>5</sup> For all UST systems. One-time costs do not apply to all UST systems.

<sup>6</sup> The lower range of the annualized O&M costs is for facilities that do not have containment sumps used for interstitial monitoring of piping.

The table below summarizes all increased costs as a result of the proposed AST regulatory requirements:

	Annualized O&M Costs	One-Time Costs	Number of Potentially Affected Systems	Total Annualized O&M Costs	Total One-Time Costs
Increased inspection frequency for vaulted ASTs	\$416	\$0	3 AST systems	\$1,248	\$0
Increased inspection frequency for small ASTs	\$98	\$0	92 AST systems	\$9,016	\$0
		\$0		\$10,264	\$0

A substantial portion of the beneficial impacts associated with this proposed rulemaking are avoided cleanup costs as a result of preventing releases and reducing the severity of releases from USTs. While not able to be quantified, a decrease in release frequency and severity is expected to result in a reduction of costs because groundwater contamination incidents and vapor intrusion remediation costs could be avoided.

The proposed rulemaking does not require legal, accounting or consulting procedures for implementation of the regulation.

(22) For each of the groups and entities identified in items (19)-(21) above, submit a statement of legal, accounting or consulting procedures and additional reporting, recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.

The proposed rulemaking does not require legal, accounting or consulting procedures for implementation of the regulation. The following new notification, reporting and other paperwork requirements are proposed in this rulemaking:

- Certified installers and inspectors shall report regulated substance observed in a containment structure or facility within 48 hours on a form provided by the Department.
- Certified installers or inspectors shall report failed tests of UST spill prevention equipment, containment sumps, and overfill prevention equipment within 48 hours on a form provided by the Department. A copy of the test results shall also be provided to the Department with the notification report.
- Responsible parties shall notify the Department by telephone or electronic mail as soon as practicable, but no later than 24 hours, after the initiation of interim remedial actions in response to a release.
- Responsible parties shall notify the Department, by telephone or electronic mail, within 24 hours of providing an alternate source of water to the owner of an affected or diminished water supply in response to a release.
- Responsible parties shall notify the Department by telephone or electronic mail as soon as practicable, but no later than 24 hours after the initiation of site characterization activities in response to a release.

- Owners and operators shall notify the Department of the proposed installation of specific UST system components such as the piping system and dispenser, and not just when a tank or tank system is being installed, on a form provided by the Department.
- Certified installers and inspectors shall document tests or evaluations of UST spill prevention and overfill prevention equipment, containment sumps, and release detection equipment on a form provided by the Department. Owners and operators shall maintain test or evaluation results onsite at the storage tank facility or at a readily available alternative site and shall provide the forms to the Department upon request.
- Surveys of UST cathodic protection systems shall be documented on a form provided by the Department and shall be provided to the Department upon request.
- Owners and operators of USTs storing alternative fuel blends or biodiesel or biodiesel blended fuel shall submit, on a form provided by the Department, information verifying that all system components are compatible with the proposed substance to be stored, prior to storing the substance in the UST.
- Owners and operators shall maintain documentation showing that their UST systems are continuously participating in the USTIF.
- Owners and operators shall maintain documentation of the last test of UST spill prevention equipment and containment sumps used for interstitial monitoring of piping and evaluation of overfill prevention equipment.
- For containment sumps used for interstitial monitoring of piping and spill prevention equipment not required to be tested, UST owners and operators shall maintain documentation showing that the equipment is double-walled and the integrity of both walls is periodically monitored.
- UST owners and operators shall maintain records of walkthrough inspections for the past 12 months.
- Owners shall ensure that Class A, Class B and Class C operators are identified on a form provided by the Department prior to placing the UST system into use.
- Owners and operators of AST facilities with an aggregate aboveground storage capacity greater than 21,000 gallons shall maintain a written log book. Each log book entry is to identify the name of the individual performing tank handling and inspection activities, the individual's signature, the company name, the date of work, start and end times, and a brief description of work performed, including tank identification.
- In addition to routine monthly inspections, AST owners and operators shall maintain 72-hour maintenance inspections for the past 12 months.
- AST owners and operators shall maintain documentation of investigations of suspected releases.
- Should a high-level alarm with a manned operator shutdown procedure be utilized, owners and operators of ASTs shall document the shutdown procedure and provide it to the Department upon request.
- When an overfill alarm or prevention device or monitoring gauge is utilized, owners and operators of ASTs shall document the shutdown procedure.

Aside from the requirements to notify the Department by telephone or electronic mail, the Department is providing the regulated community with a significant number of forms to facilitate compliance with the proposed notification and reporting requirements. In addition, one form is being proposed for deletion.

(22a) Are forms required for implementation of the regulation?

As identified in the response to (22) above, new forms are being required for implementation of the proposed regulation. In addition, it is necessary to revise several existing forms to implement this

rulemaking. One form is proposed for deletion. All new and revised forms, and the deleted form, are identified in the response to (22b) below.

(22b) If forms are required for implementation of the regulation, **attach copies of the forms here**. If your agency uses electronic forms, provide links to each form or a detailed description of the information required to be reported. **Failure to attach forms, provide links, or provide a detailed description of the information to be reported will constitute a faulty delivery of the regulation.**

The attached new forms are as follows:

- Underground Storage Tank Groundwater/Vapor Monitoring System Functionality Testing Form
- Underground Storage Tank Sensor Functionality Testing Form
- Underground Storage Tank Automatic Line Leak Detector Functionality Testing Form
- Underground Storage Tank Pressure/Vacuum Monitoring Functionality Testing Form
- Underground Storage Tank Spill Prevention Equipment/Containment Sump Integrity Testing Form
- Underground Storage Tank Automatic Tank Gauge Functionality Testing Form
- Underground Storage Tank Overfill Prevention Evaluation Form
- Aboveground Storage Tank Lining Inspection Summary and Instructions

The attached revised forms are as follows:

- Underground Storage Tank Facility Operations Inspection Report Form Instructions (2630-FM-BECB0501)
- Underground Storage Tank Facility Operations Inspection (2630-FM-BECB0501a)
- Underground Storage Tank System Installation/Closure Notification Form (2630-FM-BECB0127)
- Planning for Permanent Closure Checklist - Underground Storage Tank Systems (2630-FM-BECB0126)
- Underground Storage Tank Modification Report (2630-FM-BECB0575)
- Underground Storage Tank System Closure Report Form (2630-FM-BECB0159)
- Aboveground Storage Tank Integrity Inspection Summary and Instructions (2630-FM-BECB0150)
- Aboveground Storage Tank System Closure Report Form (2630-FM-BECB0514)
- Planning for Permanent Closure Checklist - Aboveground Storage Tank Systems (2630-FM-BECB0512)
- Aboveground Storage Tank System Closure Notification Form (2630-FM-BECB0513)
- Notification of Release/Notification of Contamination (2620-FM-BECB0082)
- Storage Tanks Registration/Permitting Application Form and Instructions (2630-PM-BECB0514)
- Storage Tank Installer/Inspector Certification Application Form and Instructions (2630-PM-BECB0506)
- Storage Tank Training Course Approval Application and Instructions (2630-PM-BECB0402)
- Storage Tank Site-Specific Installation Permit Application Instructions (2630-PM-BECB0002)
- Initial Qualifications – Storage Tank Installer and Inspector Certification (2630-PM-BECB0506b)

- Renewal Qualifications – Storage Tank Installer and Inspector Certification (2630-PM-BECB0506b2)
- Instructions – Storage Tank Installer and Inspector Certification – Attachment A (2630-PM-BECB0506c)

The following form is proposed for deletion:

- Aboveground Storage Tank Installation Inspection Summary (2630-FM-BECB0602). This form is being incorporated into the Aboveground Storage Tank Integrity Inspection Summary (2630-FM-BECB0150).

(23) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

Costs assume an effective date of January 1, 2019, for the final-form rulemaking, no increase/decrease in the number of storage tank facilities/systems subject to regulation, replacement of ball float valves at the rate of 20 percent of UST systems per year, and all owners of emergency generator USTs will add an ATG as the form of release detection. Since local and state governments own and operate regulated ASTs and USTs, the costs associated with each are a subset of the costs to the regulated community and not included in the total costs.

It is important to note that the Department needs to revise Chapter 245 to be no less stringent than the federal requirements for USTs in order to retain state program approval. If Chapter 245 was not revised, the Department would lose state program approval and EPA would then implement the UST program in the Commonwealth. Therefore, the increased costs for UST facilities detailed below would occur even if Chapter 245 was not revised due to EPA’s revised regulations for USTs at 40 CFR Part 280.

	<b>Current FY 2017/18</b>	<b>FY +1 2018/19</b>	<b>FY +2 2019/20</b>	<b>FY +3 2020/21</b>	<b>FY +4 2021/22</b>	<b>FY +5 2022/23</b>
<b>SAVINGS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0	0	Unable to monetize	Unable to monetize	Unable to monetize	Unable to monetize
<b>Local Government</b>	0	0	Unable to monetize	Unable to monetize	Unable to monetize	Unable to monetize
<b>State Government</b>	0	0	Unable to monetize	Unable to monetize	Unable to monetize	Unable to monetize
<b>Total Savings</b>	0	0	Unable to monetize	Unable to monetize	Unable to monetize	Unable to monetize
<b>COSTS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0	0	3,081,448	18,695,171	8,981,619	8,988,067
<b>Local Government</b>	0	0	132,461	1,572,830	493,038	493,246
<b>State Government</b>	0	0	132,525	1,862,230	259,729	260,353
<b>Total Costs</b>	0	0	3,081,448	18,695,171	8,981,619	8,988,067

<b>REVENUE LOSSES:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	0	0	0	0	0	0
<b>Local Government</b>	0	0	0	0	0	0
<b>State Government</b>	0	0	0	0	0	0
<b>Total Revenue Losses</b>	0	0	0	0	0	0

(23a) Provide the past three-year expenditure history for programs affected by the regulation.

The below figures only represent the expenditures from the Storage Tank Fund. Program expenditures from the federal Leaking Underground Storage Tank (LUST) Trust Fund Prevention and Cleanup grants, and the Underground Storage Tank Indemnification Fund are not included.

<b>Program</b>	<b>FY -3 (2013/14)</b>	<b>FY -2 (2014/15)</b>	<b>FY -1 (2015/16)</b>	<b>Current FY (2016/17)</b>
Storage Tank and Spill Prevention	\$ 8,350,000	\$ 9,052,000	\$ 9,026,000	\$ 8,622,000

(24) For any regulation that may have an adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), provide an economic impact statement that includes the following:

a) An identification and estimate of the number of small businesses subject to the regulation.

One or more of these revisions will affect approximately 7,100 storage tank owners, 7,800 UST facilities, and 17,900 AST systems throughout the Commonwealth. Section 3 of the Regulatory Review Act defines “Small business” in accordance with the size standards described by the United States Small Business Administration’s Small Business Size Regulations under 13 CFR Chapter 1 Part 121. A review of the regulations under 13 CFR Chapter 1, Part 121 provides a standard for determining what constitutes a small business for each North American Industry Classification System (NAICS) industry. These standards are based on number of employees or annual receipts. For the storage tank facilities regulated under the act, the Department has very little information pertaining to the NAICS for those facilities in the Environmental Facility Application Compliance Tracking System (eFACTS) database.

In the Regulatory Impact Analysis to support the federal UST final rulemaking, EPA estimated that motor fuel retailers represent approximately 80 percent of the 577,981 conventional UST systems in operation nationwide. Further, EPA estimated that there are approximately 79,700 firms operating roughly 148,000 facilities in the U.S. retail motor fuel sales sector. Based on the Small Business Administration’s annual revenue thresholds for NAICS 447110 (Gasoline Stations with Convenience Stores, \$29.5 million) and 447190 (Other Gasoline Stations, \$15 million), approximately 77,400 or 97 percent of these firms meet the Small Business Administration’s definition of small entity. The remaining 20 percent of conventional UST systems consist of emergency generator tanks, tanks used for storing and dispensing fuel in commercial settings, hospitals, manufacturing, transportation, communications and utilities, and agriculture. EPA did not evaluate these firms in terms of meeting or not meeting the definition of small business.

In support of EPA's findings, the Department's Bureau of Air Quality proposed a rulemaking to the Board on October 18, 2016 that would repeal 25 Pa. Code Chapter 126, Subchapter C (relating to gasoline volatility requirements) as codified in §§ 126.301—126.303 (relating to compliant fuel requirements; recordkeeping and reporting; and compliance and test methods) to remove requirements for gasoline with a Reid vapor pressure (RVP) of 7.8 pounds per square inch (psi) or less (low RVP gasoline) to be sold in the Pittsburgh-Beaver Valley Area between May 1 and September 15 of each year. The seven-county Pittsburgh-Beaver Valley Area includes Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, and Westmoreland Counties. The Department requested that the Pennsylvania Small Business Development Center's (SBDC) Environmental Management Assistance Program (EMAP) provide a list of businesses, including annual sales, for NAICS codes 447110 and 447190 for the Pittsburgh-Beaver Valley Area. The SBDC EMAP provided the Department with a list of 501 businesses for the requested NAICS codes. Of the 501 businesses, 385 were determined to be a small business. Of the remaining 116 businesses, there was no sales data available.

The Department had the SBDC EMAP provide a list of businesses, including annual sales and number of employees, for additional NAICS codes 424710 (Bulk gasoline stations; Gasoline, bulk stations and terminals), 424720 (Gasoline merchant wholesalers (except bulk stations, terminals)), and 493190 (Bulk petroleum storage) for the seven-county area. The annual revenue and employee thresholds for NAICS codes 424710, 424720 and 493190 are 200 employees, 200 employees, and \$27.5 million, respectively. The SBDC EMAP provided a list of 179 businesses, 171 of which were determined to be a small business. Of the remaining eight businesses, one was determined not to be a small business and seven had no available sales data. It is believed that some businesses identified in this additional NAICS code retrieval have ASTs as well.

While this data is only representative of the seven-county Pittsburgh-Beaver Valley area, and considering the EPA analysis, the Department is of the opinion that a very high percentage of the UST and AST facilities subject to this proposed rulemaking are a small business.

Department-certified storage tank installers, inspectors and companies will also be required to comply with this proposed rulemaking. At the current time, there are nearly 900 certified individuals and approximately 350 certified companies. It is believed that all certified companies are small businesses.

b) The projected reporting, recordkeeping and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.

While this proposed rulemaking adds additional notification, reporting and recordkeeping requirements, some of the notification is simply verbal or electronic notification. Where information is required to be documented, the Department is providing a significant number of forms in order to facilitate compliance with the various requirements. The majority of these forms will be completed by DEP-certified installers and inspectors who will be instructed by Department staff as to how to complete the forms. In general, any costs associated with these requirements should be minimal.

c) A statement of probable effect on impacted small businesses.

The annualized increased O&M costs to conduct walkthrough inspections, inspect overfill prevention equipment, test spill prevention equipment and containment sumps, and test release detection equipment per UST facility is estimated to range from \$831 - \$1,377. The total annualized increased costs for

these inspections and tests at all UST facilities is estimated to be \$8,232,713. These costs are based on the UST owner, operator, or other employee of the UST owner conducting the walkthrough inspections. The Department is committed to providing UST owners with proper guidance on how to conduct and document such inspections. Given the small increased per-facility costs of the regulation to conduct these UST inspections and tests, closures or changes in market structure represent an unlikely response to the regulation.

The total one-time costs to replace all ball float valves with alternate overfill prevention equipment and to add release detection to those emergency generator USTs that were previously deferred is estimated to be \$14,338,719. This equates to an average cost of \$1,038 per UST system to replace a ball float valve with alternate overfill prevention equipment and an average cost of \$16,875 per UST system to add release detection to an emergency generator UST. These one-time costs apply to a limited number of UST systems. Currently, less than 16% of all UST systems have ball float valves for overfill prevention and less than 3% of all UST systems are emergency generator USTs. Owners of emergency generator UST systems will be afforded one to two years under this proposal to make an informed decision to either add the necessary release detection, close the UST system, or close the UST system and install a new AST.

The annualized increased cost to an AST owner of a vaulted AST for an in-service inspection is estimated to be \$416. The annualized increased cost to an AST owner of a small AST for an in-service inspection is estimated to be \$98. Given the small increased per-facility costs of the regulation to conduct these AST inspections, closures or changes in market structure represent an unlikely response to the regulation.

d) A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

When EPA proposed their UST regulations in November 2011, there were a number of provisions that generally consisted of more or stricter requirements than what is in the final UST regulation. These provisions are more fully discussed in the response to (26). For one, testing of spill prevention equipment and containment sumps, and inspection of overfill prevention equipment, was to be conducted annually. The final regulation requires these tests and inspections to be performed every 3 years. Elements of the final regulation must be incorporated in Chapter 245 in order to maintain state program approval.

(25) List any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, the elderly, small businesses, and farmers.

There are no such provisions in this proposed rulemaking. However, to determine the socioeconomic characteristics of communities potentially affected by the federal UST regulation, EPA conducted a screening analysis in 2010 to examine whether a statistically significant disparity exists between socioeconomic characteristics of populations located near UST facilities and those that are not. The results indicated that minority and low-income populations are slightly more likely to be located near UST facilities. However, because of the incorporation of operation and maintenance requirements in the regulation, the number and size of releases will be reduced. Therefore, EPA concluded that the federal UST regulation will not have any disproportionately high and adverse human health or environmental effects on minority or low-income communities, or on any community.



(26) Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

As stated earlier, comprehensive federal regulations for USTs exist at 40 CFR Part 280. These regulations were initially promulgated in 1988. On July 15, 2015, the first revisions to 40 CFR Part 280 were published in the *Federal Register* as final. The primary purpose of these amendments was to strengthen the UST requirements by increasing the emphasis on properly operating and maintaining equipment. Incorporation of these UST revisions into Chapter 245 are necessary for Pennsylvania to retain state program approval from EPA and remain eligible for continued substantial federal funding for the UST program.

When EPA proposed their UST regulations in November 2011, there were a number of provisions that were more burdensome than what was promulgated in the final regulation. For one, testing of spill prevention equipment and containment sumps, and inspection of overfill prevention equipment, was to be conducted annually. The final regulation requires these tests and inspections to be performed every 3 years. EPA also proposed a 5-year phase out of groundwater and vapor monitoring for release detection. The final regulation continues to allow these methods of release detection with a proper site assessment. In addition, the following provisions generally consisted of more or stricter requirements than what is in the final UST regulation: 30-day walkthrough inspections, operability tests for release detection equipment, removing the release detection deferral for emergency generator tanks, and demonstrating compatibility with alternative fuels. For example, the 30-day walkthrough inspections in the 2011 proposed UST regulation included a monthly check of containment sumps.

(27) In conducting a regulatory flexibility analysis, explain whether regulatory methods were considered that will minimize any adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), including:

- a) The establishment of less stringent compliance or reporting requirements for small businesses;
- b) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;
- c) The consolidation or simplification of compliance or reporting requirements for small businesses;
- d) The establishment of performance standards for small businesses to replace design or operational standards required in the regulation; and
- e) The exemption of small businesses from all or any part of the requirements contained in the regulation.

This proposed rulemaking is applicable to all owners of regulated storage tanks and all DEP-certified individuals and companies. Small businesses, small organizations and small governmental jurisdictions are not exempt from any provisions of the regulations. However, small entities were certainly considered in this proposed rulemaking which includes incorporation of the necessary federal requirements to maintain state program approval. In the response to (26), it was stated that the proposed federal requirements were more stringent in a number of areas. In response to public comment and in consideration of small businesses, the final rulemaking resulted in less burdensome, yet protective requirements.

While this proposed rulemaking adds additional notification, reporting and recordkeeping requirements, some of the notification is simply verbal or electronic notification. Where information is required to be

documented, the Department is providing a significant number of forms in order to facilitate compliance with the various requirements.

The Department is also phasing in the requirements to conduct walkthrough inspections, conduct spill prevention and containment sump testing, perform overflow prevention equipment evaluations, add release detection for existing emergency generator USTs, and inspect ASTs in underground vaults and small ASTs on a more frequent basis.

Lastly, the proposed rulemaking requires UST owners and operators to test containment sumps used for interstitial monitoring of piping and spill prevention equipment once every three years to ensure the equipment is liquid-tight. However, if the equipment is double walled, the integrity of both walls may be periodically monitored, in lieu of testing the equipment once every three years. Also, UST owners and operators must conduct walkthrough inspections of spill prevention and release detection equipment at a minimum of every 30 days. However, spill prevention equipment associated with UST systems receiving deliveries at intervals greater than every 30 days, may be checked prior to each delivery.

(28) If data is the basis for this regulation, please provide a description of the data, explain in detail how the data was obtained, and how it meets the acceptability standard for empirical, replicable and testable data that is supported by documentation, statistics, reports, studies or research. Please submit data or supporting materials with the regulatory package. If the material exceeds 50 pages, please provide it in a searchable electronic format or provide a list of citations and internet links that, where possible, can be accessed in a searchable format in lieu of the actual material. If other data was considered but not used, please explain why that data was determined not to be acceptable.

Data was not the basis for this regulation.

(29) Include a schedule for review of the regulation including:

- |   |                        |
|---|------------------------|
| A. The length of the public comment period:   | <u>30 days</u>         |
| B. The date or dates on which any public meetings or hearings will be held:                   | <u>None</u>            |
| C. The expected date of delivery of the final-form regulation:                                | <u>Quarter 3, 2018</u> |
| D. The expected effective date of the final-form regulation:                                  | <u>Quarter 4, 2018</u> |
| E. The expected date by which compliance with the final-form regulation will be required:     | <u>See Below*</u>      |
| F. The expected date by which required permits, licenses or other approvals must be obtained: | <u>N/A</u>             |

\* Owners of existing storage tank systems will be provided with timeframes in which to comply with certain requirements. Owners of new storage tank systems must comply with the requirements upon the effective date of the final rulemaking.

(30) Describe the plan developed for evaluating the continuing effectiveness of the regulations after its implementation.

The Board is not establishing a sunset date for these regulations, since they are needed for the Department to carry out its statutory authority. The Department will continue to closely monitor these regulations for their effectiveness and recommend updates to the Board as necessary.