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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 280 and 281

[EPA-HQ-UST-2011-0301; FRL 9913-64-OSWER]

RIN 2050-AG46

Revising Underground Storage Tank Regulations - Revisions to Existing Requirements and New Requirements for Secondary Containment and Operator Training

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or the Agency) is making certain revisions to the 1988 underground storage tank (UST) regulation and to the 1988 state program approval (SPA) regulation. These changes establish Federal requirements that are similar to key portions of the Energy Policy Act of 2005 (EPAct); they also update the 1988 UST and SPA regulations. Changes to the regulations 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; addressing UST systems deferred in the 1988 UST regulation; adding new release prevention and detection technologies; updating codes of practice; making editorial corrections and technical amendments; and updating state program approval requirements to incorporate these new changes. EPA thinks these changes will protect human health and the environment by reducing the number of releases to the

environment and quickly detecting releases, if they occur.

DATES: This rule is effective **[**INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**]**.

ADDRESSES: EPA established a docket for this action under Docket ID No. EPA-HQ-UST-2011-0301. All documents in the docket are listed on the www.regulations.gov website. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in paper copy at the OSWER Docket, EPA/DC, WJC West Building, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding federal holidays. The telephone number for the Public Reading Room is 202-566-1744, and the telephone number for the OSWER Docket is 202-566-0270.

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SUPPLEMENTARY INFORMATION:

TABLE OF CONTENTS

I. General Information

Does this Action Apply to Me?

II. Authority

III. Background

A. Changes to the UST Regulations

B. History of the UST Laws and Regulations

C. Potential Impact of this Regulation

D. EPA's Process in Deciding Which Changes to Incorporate in the Regulations

E. Implementation Timeframe

IV. Revisions to the Requirements for Owners and Operators of Underground Storage Tank Systems

A. Establishing Federal Requirements for Operator Training and Secondary Containment

1. Operator Training

2. Secondary Containment

B. Additional Requirements for Operation and Maintenance

1. Walkthrough Inspections

2. Spill Prevention Equipment Tests

3. Overfill Prevention Equipment Inspections

4. Secondary Containment Tests

5. Release Detection Equipment Tests

C. Addressing Deferrals

1. UST Systems Storing Fuel Solely for Use by Emergency Power Generators – Require Release Detection

2. Airport Hydrant Fuel Distribution Systems and UST Systems with Field-

Constructed Tanks

3. Wastewater Treatment Tank Systems that Are Not Part of a Wastewater Treatment Facility Regulated Under Sections 402 or 307(b) of the Clean Water Act

4. USTs Containing Radioactive Material and Emergency Generator UST Systems at Nuclear Power Generation Facilities Regulated by the Nuclear Regulatory Commission

D. Other Changes

1. Changes to Overfill Prevention Equipment Requirements

2. Internal Linings that Fail the Periodic Lining Inspection and Cannot Be Repaired

3. Notification

4. Compatibility

5. Improving Repairs

6. Vapor Monitoring and Groundwater Monitoring

7. Interstitial Monitoring Results, Including Interstitial Alarms, Under Subpart E

E. General Updates

1. Incorporate Newer Technologies

2. Updates to Codes of Practice Listed in the UST Regulation

3. Updates to Remove Old Upgrade and Implementation Deadlines

4. Editorial Corrections and Technical Amendments

F. Alternative Options EPA Considered

V. Updates to State Program Approval Requirements

VI. Overview of Estimated Costs and Benefits

VII. Statutory and Executive Orders

A. Executive Order 12866: Regulatory Planning and Overview and Executive Order 13563: Improving Regulation and Regulatory Review

B. Paperwork Reduction Act

C. Regulatory Flexibility Act

D. Unfunded Mandates Reform Act

E. Executive Order 13132: Federalism

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

I. National Technology Transfer and Advancement Act

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

K. Congressional Review Act

I. General Information

Does this Action Apply to Me?

In the table below, EPA is providing a list of potentially affected entities using North American Industry Classification System (NAICS) codes. However, this final action may affect other entities not listed below. The Agency's goal with this section is to provide a guide for readers to consider regarding entities that potentially could be affected by this action. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

Industry Sectors Potentially Affected By The Final Regulation	
Industry Sector	NAICS Code
Retail Motor Fuel Sales	447
Commercial (wholesale trade, retail trade, accommodation, and food services)	42, 44-45, 72 (excluding 447)
Institutional (hospitals only)	622
Manufacturing	31-33
Transportation (air, water, truck, transit, pipeline, and airport operations)	481, 483-486, 48811
Communications And Utilities (wired telecommunications carriers; and electric power generation, transmission, and distribution)	5171, 2211
Agriculture (crop and animal production)	111, 112

II. Authority

EPA is revising these regulations under the authority of sections 2002, 9001, 9002, 9003, 9004, 9005, 9006, 9007, 9010, and 9012 of the Solid Waste Disposal Act (SWDA) of 1965, as amended (commonly known as the Resource Conservation and Recovery Act (RCRA)) [42 U.S.C. 6912, 6991, 6991(a), 6991(b), 6991(c), 6991(d), 6991(e), 6991(f), 6991(i), and 6991(k)].

III. Background

A. *Changes to the UST Regulations*

After reviewing and incorporating comments received during the five month public comment period, EPA is finalizing certain changes to the 1988 UST regulation in 40 CFR part 280. EPA is also revising its SPA regulation in 40 CFR part 281 to incorporate the changes in 40 CFR part 280.

These revisions strengthen the 1988 UST regulation by increasing the emphasis on properly operating and maintaining equipment. The 1988 UST regulation required owners and operators to have spill, overfill, and release detection equipment in place for their UST systems, but did not require proper operation and maintenance for some of that equipment. For example, EPA required spill prevention equipment to capture drips and spills when the delivery hose is disconnected from the fill pipe, but did not require periodic testing of that equipment. These revisions require that UST equipment is operated and maintained properly, which will improve environmental protection. These revisions also acknowledge improvements in technology over the last 26 years, including the ability to detect releases from UST systems deferred in the 1988 UST regulation.

EPA is revising the 1988 UST regulation to:

- Establish federal requirements that are similar to certain key provisions of the Energy Policy Act of 2005;
- Ensure owners and operators properly operate and maintain their UST systems;
- Address UST systems deferred in the 1988 UST regulation;
- Include updates to current technology and codes of practices;

- Make technical and editorial corrections; and
- Update the SPA regulation to address the changes listed above.

In 1988, EPA first promulgated the UST regulation (40 CFR part 280) to prevent, detect, and clean up petroleum releases into the environment. The 1988 UST regulation required new UST systems to be designed, constructed, and installed to prevent releases; existing UST systems had to be upgraded to prevent releases. In addition, owners and operators were required to perform release detection, demonstrate financial responsibility, and clean up releases.

The Energy Policy Act of 2005 amended Subtitle I of SWDA, the statute that authorized the UST program. Key Energy Policy Act provisions (such as secondary containment and operator training) apply to all states and United States' territories, hereafter referred to as states, receiving federal Subtitle I money under SWDA, regardless of their state program approval status, but do not apply in Indian country. The United States has a unique legal relationship with federally recognized Indian tribes. This government to government relationship includes recognizing the rights of tribes as sovereign governments with the right to self-determination and acknowledging the federal government's trust responsibility to tribes. As a result, EPA directly implements the UST program in Indian country.

In order to establish federal UST requirements that are similar to the UST secondary containment and operator training requirements of the Energy Policy Act, EPA decided to revise the 1988 UST regulation. These revisions also fulfill objectives in EPA's August 2006 UST Tribal Strategy,[1] where both EPA and tribes recognized the importance of requirements that ensure parity in program implementation among states and in Indian country. Secondary containment will reduce releases to the environment by containing them within a secondary area

[1] 2006 Tribal Strategy, http://epa.gov/oust/fedlaws/tribalst.htm

and detecting them before they reach the environment. Operator training will educate UST system operators and help them prevent releases by complying with the regulation and performing better operation and maintenance of their UST systems.

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 partners have made significant progress in reducing the number of new releases, approximately 6,000 releases are discovered each year as of FY 2013.[2] 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. See section IV.B, Additional Requirements for Operation and Maintenance for a more detailed discussion of problems.

EPA relied on two draft causes of releases studies to help support this final UST regulation. *Petroleum Releases at Underground Storage Tank Facilities in Florida* contains release data on 512 releases from new and upgraded tanks in Florida.[3] The second draft study, *Evaluation of Releases from New and Upgraded Underground Storage Tank Systems*, contains release data on 580 releases from new and upgraded tanks in 23 states across the Northeast,

[2] Semi-Annual Report Of UST Performance Measures, End Of Fiscal Year 2013, http://epa.gov/oust/cat/camarchv.htm

[3] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005

South, and Central parts of the United States.[4] Taken together, these draft studies provide information on 1,092 releases in 24 of 50 states. The data in the two studies generally provide a representative sampling of releases across the United States, because nearly half of the states contributed to the studies. Both drafts were peer reviewed but never finalized because passage of the Energy Policy Act of 2005 required a reallocation of personnel and resources. Even though these studies were never finalized, the underlying data and calculations can be used to support this final UST regulation because that information did not change as a result of the peer review process. These studies are available in the docket for this final action.

Many USTs currently in the ground were upgraded to meet the spill, overfill, corrosion protection, and release detection requirements in the 1988 UST regulation. As these USTs continue to age, it is vital that we ensure they are still working as intended. These revisions to the 1988 UST regulation focus on ensuring equipment is working, rather than requiring UST owners and operators to replace or upgrade equipment already in place. The 1988 UST regulation requires owners and operators to use equipment that could help prevent releases. These revisions highlight the importance of operating and maintaining UST equipment so releases to the environment are prevented or quickly detected.

This final UST regulation addresses UST systems deferred in the 1988 UST regulation by removing the deferral and regulating UST systems with field-constructed tanks, airport hydrant fuel distribution systems that meet the UST definition, and UST systems storing fuel solely for use by emergency power generators. Note that aboveground storage tanks associated with UST systems with field-constructed tanks and airport hydrant fuel distribution systems that meet the UST definition are partially excluded in this final UST regulation. EPA is partially excluding

[4] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

wastewater treatment tank systems that are not part of a wastewater treatment facility regulated under sections 402 or 307(b) of the Clean Water Act, USTs containing radioactive material, and emergency generator UST systems at nuclear power generation facilities regulated by the Nuclear Regulatory Commission. See section IV.C, Addressing Deferrals, for more information.

EPA is revising the 1988 SPA regulation (40 CFR part 281) to address the changes to 40 CFR part 280. By doing so, states will generally need to adopt the 40 CFR part 280 changes finalized today in order to obtain or retain SPA.

Please note that, although not a part of this final UST regulation, owners and operators may also be subject to other requirements related to underground storage tank systems. For example, EPA's Office of Air and Radiation has national emission standards for hazardous air pollutants for various source categories, including gasoline dispensing facilities (see 40 CFR part 63). These standards include some testing for UST systems, depending on the monthly throughput of the facility.

Finally, EPA allows owners and operators the flexibility to maintain either paper or electronic records to demonstrate compliance with this final UST regulation. EPA encourages owners and operators to maintain records electronically, which promotes innovation[5] and simplifies compliance by using 21st century technology tools.[6]

B. *History of the UST Laws and Regulations*

[5] Executive Order 13563, "Improving Regulation And Regulatory Review," Section 3, see http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf

[6] EPA Budget in Brief, February 2012, p. 4, see http://yosemite.epa.gov/sab/sabproduct.nsf/2B686066C751F34A852579A4007023C2/$File/FY2013_BIB.pdf

In 1984, Congress responded to the increasing threat to groundwater posed from leaking USTs by adding Subtitle I to SWDA, commonly referred to as RCRA. Subtitle I of SWDA required EPA to develop a comprehensive regulatory program for USTs storing petroleum or certain hazardous substances, ensuring that the environment and human health are protected from UST releases. In 1986, Congress amended Subtitle I of SWDA and created the Leaking Underground Storage Tank Trust Fund to implement a cleanup program and pay for cleanups at sites where the owner or operator is unknown, unwilling, or unable to respond, or which require emergency action.

In 1988, EPA promulgated the UST regulation (40 CFR part 280), which set minimum standards for new UST systems and required owners and operators of existing UST systems to upgrade, replace, or close them. In addition, after 1988 owners and operators were required to report and clean up releases from their USTs. The 1988 UST regulation set deadlines for owners and operators to meet those requirements by December 22, 1998. Owners and operators who chose to upgrade or replace had to ensure their UST systems included spill and overfill prevention equipment and were protected from corrosion. In addition, owners and operators were required to monitor their UST systems for releases using release detection (phased in through 1993, depending on when their UST systems were installed). Finally, owners and operators were required to demonstrate financial responsibility (phased in through 1998), which ensured they have financial resources to pay for cleaning up releases. EPA has not significantly changed the UST regulation since 1988.

In 1988, EPA also promulgated a regulation for state program approval (40 CFR part 281). Since states are the primary implementers of the UST program, EPA established a process

where state programs could operate in lieu of the federal program, if states met certain requirements and obtained state program approval from EPA. The state program approval regulation describes minimum requirements states must meet so their programs can be approved and operate in lieu of the federal program.

In 2005, the Energy Policy Act further amended Subtitle I of SWDA. The Energy Policy Act required states receiving Subtitle I money from EPA to meet certain requirements. EPA developed grant guidelines for states regarding: operator training; inspections; delivery prohibition; secondary containment; financial responsibility for manufacturers and installers; public record; and state compliance reports on government USTs.[7] The operator training and secondary containment requirements are two major pieces of the Energy Policy Act that did not apply in Indian country, but will now apply with publication of this final UST regulation.

C. *Potential Impact of this Regulation*

This final UST regulation will improve parity in program implementation among states and in Indian country. This regulation is adding to the federal UST regulation certain requirements, which will apply in Indian country. These requirements are similar to the Energy Policy Act's operator training and secondary containment requirements, which apply in states receiving federal Subtitle I money from EPA. This action will also further strengthen protection of human health and the environment from UST releases by increasing the emphasis on proper operation and maintenance of release prevention and release detection equipment. These revisions also reflect improvements in technology that allow for the ability to prevent and

[7] EPA guidelines for the Energy Policy Act can be found at: http://epa.gov/oust/fedlaws/epact_05.htm

quickly detect releases for many tank systems currently deferred from regulation under Subtitle I.

The regulatory changes finalized today impose costs to owners and operators of existing regulated UST systems and owners and operators of USTs deferred in the 1988 UST regulation, as well as costs associated with state review of the changes. EPA prepared an analysis of the potential incremental costs and benefits associated with this action. This analysis is contained in the regulatory impact analysis (RIA) titled *Assessment of The Potential Costs, Benefits, and Other Impacts of the Final Revisions to EPA's Underground Storage Tank Regulations*, which is available in the docket for this action. Numerous commenters submitted input relaying their concerns about the costs and feasibility of specific requirements in the 2011 proposed UST regulation. EPA considered these comments and adjusted this final UST regulation to alleviate some of the burden on owners and operators. For example, EPA is requiring testing of spill prevention equipment every three years instead of annually. EPA also adjusted some of the assumptions underlying the RIA to reflect information received from commenters. For example, several commenters provided water disposal costs associated with spill bucket testing. While the RIA for the 2011 proposed UST regulation assumed these costs were part of the spill prevention testing cost, EPA adjusted this assumption to reflect that, in some cases, owners and operators will incur additional costs to dispose of the water. A summary of these impacts is provided in section VI, Overview of Estimated Costs and Benefits, and in the table below. Note that due to data and resource constraints, EPA was unable to quantify or monetize some of this final UST regulation's benefits, including avoidance of human health risks, groundwater protection, ecological benefits, and mitigation of acute exposure events and large-scale releases (e.g., releases from airport hydrant distribution systems and UST systems with field-constructed tanks).

Costs And Benefits Of The UST Regulation (2012$ Millions)*		
	7% Discount Rate	3% Discount Rate
Total Annual Social Costs	$160	$160
Total Annual Avoided Costs	$310 Range: ($120 - $530)	$360 Range: ($130 - $610)
Net Cost (Savings) To Society	($160) Range: $40 - ($370)	($200) Range: $25 - ($450)
*Totals may not add up due to rounding		

EPA also prepared a risk assessment for the 2011 proposed UST regulation titled *Risk Analysis to Support Potential Revisions to Underground Storage Tank (UST) Regulations*. The risk assessment examined potential impacts to groundwater and subsequent chemical transport, exposure, and risk. EPA decided not to spend resources to finalize the risk assessment through a formal peer review process, because the results from the risk assessment did not materially impact the RIA. Changes brought about by this final UST regulation are not expected to significantly alter these outcomes. The risk assessment developed for the 2011 proposed UST regulation is available for review in the docket.

D. *EPA's Process in Deciding Which Changes to Incorporate in the Regulations*

After the Energy Policy Act became law, EPA recognized a need to revise the 1988 UST regulation. The Energy Policy Act required additional measures to protect groundwater (either with secondary containment or financial responsibility for manufacturers and installers) and operator training requirements in states receiving federal Subtitle I money from EPA. However, no similar requirements would apply in Indian country until EPA promulgates a regulation. Both EPA and tribes are committed to ensuring program parity between states and in Indian country, and this final UST regulation achieves this parity.

For the past 26 years, the 1988 UST regulation worked well to provide environmental protection. However, over two decades of experience implementing the UST program have shown there are a number of areas where EPA can improve the UST program and increase environmental protection. For example, updating the UST regulation to reflect current technologies and ensuring release prevention and release detection equipment are properly operated and maintained have surfaced as areas needing improvement and are included as part of this final UST regulation.

Throughout the regulatory development process, EPA embraced an open, inclusive, and transparent process so all UST stakeholders had an opportunity to share their ideas and concerns. EPA recognizes concerns about costs to owners and operators and the importance of limiting requirements for retrofits. In developing this action, EPA reached out to stakeholders involved in all aspects of the tank program, provided multiple opportunities for sharing ideas, and kept stakeholders informed of progress.

As a result of the information collected during our extensive outreach to stakeholders, EPA published proposed regulations in the November 2011 *Federal Register*.[8] In order to ensure all stakeholders had an opportunity to comment, EPA provided a five month public comment period on the proposed UST and SPA regulations.

A number of commenters provided general input on EPA's 2011 proposal to update the UST and SPA regulations. Many commenters appreciated the extensive stakeholder outreach EPA conducted prior to drafting the proposed changes to the UST and SPA regulations. A few commenters believed EPA's outreach was not adequate. EPA conducted extensive stakeholder

[8] Proposed Rule Revising the Underground Storage Tanks Regulation. *Federal Register*. November 18, 2011. https://www.federalregister.gov/articles/2011/11/18/2011-29293/revising-underground-storage-tank-regulations-revisions-to-existing-requirements-and-new

outreach before publishing the proposal; we held more than 100 meetings with stakeholders during the two years prior to issuing the 2011 proposed UST and SPA regulations. To further understand comments and concerns, EPA continued to meet with all interested stakeholders during and after the five month public comment period.

Most commenters expressed support for the general revisions to the 1988 UST and SPA regulations. They supported updating the regulations because technology has changed a great deal since the 1980s. Many commenters provided specific concerns on particular topics in the 2011 proposed UST and SPA regulations. We discuss these comments throughout the preamble for this action. Several commenters opposed the changes to the regulations due to concerns about potential costs on owners, especially small businesses. A few commenters requested EPA withdraw the entire proposal and conduct a small business advocacy review panel under the Regulatory Flexibility Act. EPA carefully considered the potential impacts of the proposal on small businesses and determined that a small business panel was not required. EPA also considered all of the comments submitted during the public comment period, including those concerns regarding the potential costs on small businesses, and worked to minimize those costs by making certain changes to the final regulations. EPA did not change this final UST and SPA regulations when comments were beyond the scope of the regulations or beyond EPA's statutory authority.

E. *Implementation Timeframe*

This final UST regulation aligns the implementation time frames for the new operator training, operation and maintenance, and previously deferred UST system requirements. The

table below provides the implementation time frames for each of the new requirements.

Implementation Time Frames For New Requirements	
New Requirement	Implementation Time Frame
Flow restrictors in vent lines may no longer be used to meet the overfill prevention requirement at new installations and when an existing flow restrictor is replaced	Owners and operators must begin meeting these requirements on the effective date of this final UST regulation
Testing following a repair	
Closure of internally lined tanks that fail the internal lining inspection and cannot be repaired according to a code of practice	
Notification of ownership changes	
Demonstrating compatibility	
For airport hydrant fuel distribution systems and UST systems with field-constructed tanks: • Notification and financial responsibility [9] • Release reporting • Closure	
Operator training	Owners and operators must begin meeting these requirements three years after the effective date of this final UST regulation
For previously deferred UST systems: • Subpart D for UST systems that store fuel solely for use by emergency power generators • Subpart K (except notification, financial responsibility, release reporting, and closure) for airport hydrant fuel distribution systems and UST systems with field-constructed tanks	
Spill prevention equipment testing	Owners and operators must conduct the first test or inspection within three years after the effective date of this final UST regulation
Overfill prevention equipment inspections	
Containment sump testing for sumps used for piping interstitial monitoring	
Release detection equipment testing	
Walkthrough inspections	

EPA proposed different implementation time frames for the various requirements, and for several requirements, a phased in approach based on tank age. Based on commenter input, EPA is not using the phased in approach and instead is requiring owners and operators to meet the requirements as described in the implementation table above. In addition, with one exception

[9] Note that EPA is requiring owners and operators to also submit a one-time notification of existence for these UST systems within 3 years of the effective date of this final UST regulation. Owners and operators must demonstrate financial responsibility when they submit the one-time notification form

EPA is aligning implementation of the requirements in this final UST regulation to begin on the effective date of the UST regulation or three years after the effective date of the UST regulation. The requirements implemented on the effective date of the final UST regulation are those that either do not require significant education and outreach or apply to new installations, repairs, or releases. EPA is allowing up to three years for owners and operators to implement the requirements that require significant outreach, equipment to be upgraded or installed (such as for previously deferred UST systems), or scheduling and testing. Three years allows ample time for implementing agencies to educate owners and operators about this new requirements and allows owners and operators to schedule testing. The exception to implementing the requirements immediately or in three years is that EPA is implementing the secondary containment requirement 180 days after the effective date of the UST regulation. The 180 day time frame allows flexibility for those owners and operators who have concrete plans but have not yet applied for or obtained approvals or permits for a new UST system installation.

IV. Revisions to the Requirements for Owners and Operators of Underground Storage Tank Systems

The following sections describe this final UST regulation, starting with establishing new requirements for operator training and secondary containment. The next four sections address changes to the 1988 UST regulation, organized by topic: additional requirements for operation and maintenance; addressing UST systems deferred in the 1988 UST regulation; other changes to improve release prevention and release detection; and general updates to the 1988 UST regulation. Finally, there is a section describing alternative options considered.

A. *Establishing Federal Requirements for Operator Training and Secondary Containment*

1. Operator Training

This final UST regulation adds a new subpart J, which contains operator training requirements to ensure properly trained individuals operate all regulated UST systems. The operator training provision of the Energy Policy Act of 2005 requires implementing agencies, as a condition of receiving federal Subtitle I money, develop state-specific training requirements for three classes of UST system operators. EPA issued grant guidelines that provide minimum requirements state operator training programs must include in order for states to continue receiving federal Subtitle I money.[10] All states are implementing or plan to implement operator training. The EPAct did not specifically require operator training in Indian country. To bring UST systems in Indian country to the same level of protection as UST systems in states, this final UST regulation implements operator training requirements.

This final UST regulation closes the gap in coverage and ensures all operators designated as Class A, B, or C operators are trained according to their level of responsibility. Sufficiently training designated UST operators will increase compliance with regulatory requirements. In addition, operator training should decrease UST system releases by educating Class A, B, and C operators about their UST system requirements and result in greater protection of human health and the environment.

[10]Grant Guidelines To States For Implementing The Operator Training Provision Of The Energy Policy Act Of 2005: www.epa.gov/oust/fedlaws/optraing.htm

The operator training requirements in this final UST regulation are consistent with the requirements in EPA's operator training grant guidelines for states. In both, EPA establishes minimum operator training requirements, yet allows flexibility to tailor training programs for specific needs. This means that although there may be variations among operator training programs, all Class A, B, and C operators will have a minimum level of knowledge about their UST system requirements.

Definitions

EPA is adding definitions for the three operator classes requiring training to distinguish them from the term operator originally defined in the 1988 UST regulation and maintained in this final UST regulation. Only if Class A, B, or C operators meet the definition of operator will they be subject to the same responsibilities and liabilities as an operator. EPA's definitions of Class A, B, and C operators do not relieve UST system owners and operators from legal responsibility for complying with the UST regulation. EPA based the three operator class definitions on duties each typically perform at UST facilities. Commenters on the 2011 proposed UST regulation indicated this final UST regulation should further differentiate Class A, B, and C operators from EPA's definition of operator. EPA agrees with commenters and is changing the title of § 280.241 to *Designation of Class A, B, and C operators* in the final UST regulation. This change correctly identifies the individuals who must be designated.

With the exception of the definition for the Class C operator, the operator class definitions remain unchanged from the 2011 proposed UST regulation. Several commenters pointed out that UST system owners and operators were, at the time of the 2011 proposed UST

regulation, using contractors to perform Class C operator functions. Some commenters believed EPA was restricting the use of a contractor as a Class C operator since the proposal required a Class C operator to be an employee. EPA agrees; we are removing the restriction. EPA does not intend for the operator training requirements to restrict UST system owners and operators who are using contractors to operate their UST systems.

EPA added a definition for training program in the 2011 proposed UST regulation; we are modifying it in this final UST regulation. It is important that training programs for Class A, B, and C operators include both sharing information and evaluating knowledge. Several commenters requested clarification on how EPA expected knowledge to be verified. To address these requests, EPA changed the definition of training program by adding the phrase "*through testing, practical demonstration, or another approach acceptable to the implementing agency.*" This addition clarifies the definition and makes it consistent with how the term is used in this final UST regulation.

How Operators Are Designated

This final UST regulation indicates how UST owners and operators are to designate the three operator classes for their facilities. UST owners and operators must designate at least one Class A and B operator at each facility. Class A and B operators may provide training to Class C operators, which should help UST owners and operators comply with this requirement. The UST owner and operator must ensure Class C operator training is documented.

Because Class C operators' duties typically require them to provide initial responses to emergencies, individuals who meet the Class C operator definition must be designated as such

and trained in UST system emergency response – for example response to release detection alarms, spills, or releases. EPA received several comments on the 2011 proposed UST regulation requesting we require only one Class C operator be designated. The final UST regulation requires all individuals who meet the definition of Class C operator be trained. EPA maintains that the initial response to emergencies provided by this operator class is important to environmental protection. Requiring training for all individuals who meet the Class C operator definition will increase the likelihood UST system emergencies are quickly and appropriately addressed. This does not mean all workers need to be trained. For example, numerous workers at convenience stores do not control or monitor dispensing or sale of petroleum products, nor are they responsible for initial alarms. As a result, it is unnecessary to designate and train these individuals to meet Class C operator training requirements.

In addition, EPA acknowledges some readers might misinterpret that control of the dispensing operation described in the definition of the Class C operator applies to anyone fueling a vehicle. The level of UST system control and responsibility of individuals who must be trained excludes customers who are pumping product into their vehicles. For example, police officers using an unmanned facility would not have to meet Class C operator training requirements unless they are responsible, as specifically tasked by UST system owners and operators, to respond to emergencies and alarms caused by spills or releases from the UST system.

In the preamble to the 2011 proposed UST regulation, EPA acknowledged that many UST owners and operators might want to designate one person at an UST facility to fulfill more than one class of operator. This final UST regulation allows one person to serve in multiple operator classes; however, that person must be trained for each class designated.

EPA is aware owners and operators rely on contractors to perform various UST system tasks, including those of Class A, B, and C operators. Because of the current use of contractors, EPA is allowing UST owners and operators to designate contractors as their Class A, B, and C operators, as long as they are trained in all areas for the class of operator designated. UST owners and operators must maintain documentation containing individual names (not just company names) of Class A, B, and C operators. This will allow implementing agencies to use individual names, rather than company names, when verifying training, retraining, and refresher training.

Who Must Be Trained

This final UST regulation requires training for designated Class A, B, and C operators at UST systems regulated under Subtitle I. This includes UST systems at attended and unattended facilities. An unattended UST facility means a Class A, B, or C operator might not be present when a facility is operating. Nonetheless, even for unattended UST facilities, owners and operators must designate and train Class A, B, and C operators.

Requirements for Operator Training

In the operator training grant guidelines for states, EPA based the three operator classes on duties each typically perform at UST facilities. Building on that, this final UST regulation requires each person designated in an operator class to participate in a specific training program or pass an examination comparable to the training program.

- For Class A operators, the training program must teach and evaluate their knowledge to make informed decisions regarding compliance and determine whether appropriate people are performing the operation, maintenance, and recordkeeping requirements for UST systems.
- For Class B operators, the training program must teach and evaluate their knowledge and skills to implement UST regulatory requirements on typical UST system components or site-specific equipment at UST facilities.
- For Class C operators, the training program must teach and evaluate their knowledge to take appropriate action, including notifying appropriate authorities, in response to emergencies or alarms caused by spills or releases from UST systems.
- For all operator classes, the test is based on the training program and evaluates the minimum knowledge required for the operator class.

EPA received several comments on the description of Class C operator training requirements. One commenter suggested EPA should clarify the scope of emergencies a Class C operator is trained on. This final UST regulation requires Class C operators receive training on emergencies or alarms caused by spills or releases from operating UST systems. EPA also agrees with the comment regarding Class C operator training avoiding triggering the Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. HAZWOPER is the United States' recognized standard of safety requirements employers and their subcontractors or public sector responders must meet in order to conduct cleanups or emergency response operations. The level of training in this standard is beyond that which EPA intends for Class C operators. This final UST regulation modifies the training requirements for Class C operators

and clarifies that appropriate actions Class C operators can take include notifying appropriate authorities.

For each class of operator, EPA considered developing specific training curricula prescribing length of training, topic areas, and trainer qualifications. Instead, this final UST regulation provides general criteria and requirements, because they provide flexibility while ensuring each class of operator is trained in a way that is comparable to EPA's operator training grant guidelines for states. EPA also modified the lists of training requirements for Class A and B operators from those identified in the 2011 proposal. The modifications made it clearer that new operation and maintenance inspection and testing, and compatibility demonstration requirements must be covered by operator training programs and comparable examinations.

EPA received several comments regarding restrictions on who may develop and administer the evaluation component of training, as well as restrictions on who may train Class A and B operators. This final UST regulation removes those restrictions because they could prohibit in-house and other potentially viable training. EPA supports a variety of operator training approaches. However, for retraining, EPA is revising language in § 280.244 to address conflicts of interest. This final UST regulation requires the training program or comparable examination to be developed or administered by an independent organization, the implementing agency, or a recognized authority. These retraining restrictions will help address any ineffective training approaches.

This final UST regulation allows a variety of ways to train operators, including classroom, computer based, hands on, and any combination of these. In lieu of completing a training program, Class A, B, or C operators can pass a comparable examination – such as

classroom, Internet, or computer based – that meets the requirements for operator training described in this final UST regulation.

When Designated Operators Must Complete Operator Training

This final UST regulation requires UST owners and operators ensure all Class A, B, and C operators successfully complete a training program or a comparable examination within three years of the effective date of this final UST regulation. EPA proposed a phased in approach over three years, based on UST installation dates because older USTs potentially pose a greater risk to the environment and Class A, B, and C operators of those systems should be trained first. EPA received comments strongly indicating EPA should not phase in the operator training requirements. EPA agrees with commenters that it is less confusing to establish a single compliance date for this requirement. EPA is aligning implementation of operator training with the three year inspection requirement, which will make it easier for UST system owners and operators to comply.

Consistent with EPA's operator training grant guidelines, new operators designated after the three year implementation period must be trained as follows:

- Class A and B operators must be trained within 30 days of assuming duties
- Class C operators must be trained before they assume their duties because they must be able to immediately respond to emergencies

Retraining

Class A and B operators are responsible for ensuring their UST systems are compliant. Generally, Class A and B operators need to be retrained if the UST systems they are responsible for are determined to be out of compliance. At a minimum, retraining must cover those areas the implementing agency determines are out of compliance. Retraining must be completed within 30 days of the implementing agency's final determination of noncompliance. This final UST regulation allows designated operators to take annual refresher training in lieu of retraining, as long as all training areas required by regulation are covered. Designated operators must be subject to the annual refresher training in place at the time of the violation.

This final UST regulation also allows implementing agencies to waive the retraining requirement. Unless waived, Class A and B operators must complete retraining according to § 280.244. EPA recommends the waiver be in writing. In waiving the requirement, EPA expects the implementing agency to consider factors such as the severity and areas of noncompliance. For example, retraining should not be required for equipment found inoperative during an inspection if one of the following apply: the owner and operator was unaware of the problem and operation and maintenance records indicate the equipment was operating during the most recent test or inspection; or the owner or operator is aware of the problem and has scheduled a timely repair. In those instances where UST system noncompliance violations do not warrant retraining, EPA encourages implementing agencies to provide information about the compliance issue to Class A and B operators so they are able to return their facilities to compliance. This provides greater flexibility for UST owners and operators to meet the retraining requirement. This final UST regulation is consistent with EPA's retraining requirement for noncompliance with significant operational compliance requirements and an annual refresher training allowance in our operator training grant guidelines for states.

This final UST regulation addresses comments about the terms independent trainer and independent organization in the retraining requirement at § 280.244. In this section, EPA is requiring that a training program or comparable examination be developed, administered, or both by an independent organization, the implementing agency, or recognized authority. A recognized authority includes, but is not limited to, tribes recognized by the U.S. Department of Interior Bureau of Indian Affairs. The development, administration, or both by an independent organization applies to all training approaches (classroom, Internet based, testing, etc.) and provides sufficient control for the implementing agency to address conflict of interest and other concerns during retraining.

EPA considered requiring retraining when UST facilities change equipment, but decided this would be a significant burden on both the regulated community and implementing agencies. However, if an UST system is out of compliance because of an equipment change, EPA is requiring that UST owners and operators ensure Class A and B operators are retrained as discussed above.

Documentation

This final UST regulation requires owners and operators maintain records on currently designated Class A, B, and C operators, rather than records on all Class A, B, and C operators for the previous three years, as proposed. EPA is requiring owners and operators maintain basic information to document Class A, B, and C operators and confirm they are appropriately trained. For example, classroom training records must be signed by the trainer and include information about the training company; computer based training records do not require a signature, but must

indicate the name of the training program and the Web address, if Internet based. This final UST regulation also modifies § 280.245(b)(1) by clarifying that the requirement for a record of training is also applicable when Class A or B operators train Class C operators. UST owners and operators must document verification of training or retraining for each class of operator. Owners and operators must maintain records verifying training or retraining as long as Class A, B, and C operators are designated at the facility.

2. Secondary Containment

This final UST regulation adds new requirements for secondary containment and interstitial monitoring of new and replaced tanks and piping along with under-dispenser containment (UDC) of new dispenser systems. Data from release sites show a higher number of releases from single walled tanks and piping when compared to secondarily contained systems.[11,12] These new requirements will prevent regulated substances from reaching the environment and ensure a consistent level of environmental protection for regulated UST systems across the United States.

The Energy Policy Act of 2005 requires implementing agencies, as a condition of receiving federal Subtitle I money, implement additional measures to protect groundwater. Under EPAct, implementing agencies' choices to protect groundwater are: secondary containment (including UDC); or financial responsibility for manufacturers and installers (and installer certification). All states are implementing or plan to implement secondary containment.

[11] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005
[12] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

The EPAct did not specifically require additional measures to protect groundwater in Indian country. To bring UST systems in Indian country to the same level of environmental protection as UST systems in states, this final UST regulation implements secondary containment requirements for new and replaced tanks and piping along with UDC underneath all new dispenser systems.

The EPAct requires states that receive federal Subtitle I money (and choose the secondary containment option) to have secondary containment and UDC for tanks, piping, and dispensers only if they are installed or replaced within 1,000 feet of an existing community water system or potable drinking water well.[13] However, EPA is requiring all new and replaced tanks and piping to install secondary containment and new dispenser systems to install UDC for these reasons:

- Nearly all new and replaced tanks and piping are installed within 1,000 feet of an existing community water system (CWS) or potable drinking water well (PDWW). An UST listed with a commercial ownership type (i.e., gas station) is typically located within 1,000 feet of an on-site well or public water line because nearly all commercially-owned facilities with USTs require water utilities in order to operate. In addition, privately owned facilities (i.e., fleet fueling for non-marketers) are generally in close proximity to some type of water supply, given that these sites are typically combined with other functional operations (office, maintenance, manufacturing, etc.) and require water for restrooms, water fountains, shops, etc.;[14]
- Some implementing agencies that require secondary containment only within 1,000 feet

[13] Title XV, Subtitle B, Section 1530 of Energy Policy Act of 2005, Public Law 109-58, August 8, 2005
[14] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

of a CWS or PDWW informed EPA that installations of single walled tanks or piping are not occurring; and

- Secondary containment for all new and replaced tanks and piping along with UDC for new dispenser systems will help protect other sensitive areas, such as designated source water protection areas, natural springs, and surface waters.

The EPAct requires under-dispenser containment underneath new motor fuel dispenser systems at UST systems regulated under 40 CFR part 280. However, EPA is aware of a small number of dispenser systems, such as kerosene dispensers, that do not dispense motor fuel. Small releases can occur at these dispensers in the same manner as they occur at motor fuel dispensers.[15,16,17] Therefore, this final UST regulation requires owners and operators install UDC underneath new dispenser systems at UST systems regulated under 40 CFR part 280, irrespective of whether they dispense motor fuel.

The secondary containment requirement applies to new or replaced underground tanks and piping regulated under Subtitle I, except those excluded by regulation in § 280.10(b) and those partially excluded by regulation in § 280.10(c). Petroleum and hazardous substance USTs must meet the secondary containment requirement with the corresponding use of interstitial monitoring for release detection. The 1988 UST regulation allowed variances to the use of interstitial monitoring as the method of release detection for hazardous substance USTs. Since these variances are no longer an option, EPA is removing the language allowing variances for new installations from this final UST regulation.

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[15] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005

[16] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

[17] *Frequency And Extent Of Dispenser Releases At Underground Storage Tank Facilities In South Carolina* (EPA-510-R-04-004, September 2004). http://epa.gov/oust/pubs/dispenser.htm

EPA is requiring owners and operators install tank and piping secondary containment that: will contain regulated substances leaked from the primary containment until they are detected and removed; will prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and is monitored for a leak at least once every 30 days using interstitial monitoring. These requirements are consistent with the requirements for secondarily contained hazardous substance tanks in § 280.42 and are necessary to help prevent releases to the environment.

EPA is not requiring secondary containment for piping that meets the requirements of § 280.41(b)(2)(i) through (v), sometimes called safe suction piping, because such piping is currently not required to meet release detection requirements. Safe suction piping uses a suction pump to deliver regulated substances from the UST to the dispenser. Safe suction piping operates at less than atmospheric pressure, slopes towards the UST so regulated substances drain to the UST if suction is lost, and has only one check valve located close to the suction pump. As discussed in the 1988 UST regulation preamble, these characteristics ensure that little, if any, regulated substances will be released if a break occurs in the line.[18] Similarly, EPA considers piping that manifolds two tanks together, which has characteristics that allow product to drain to the manifolded tanks if the piping loses suction, the same as safe suction piping. In addition, this final UST regulation does not require secondary containment for new and replaced piping associated with field-constructed tanks greater than 50,000 gallons in capacity and airport hydrant fuel distribution systems. See section C-2 for additional information about these types of UST systems.

EPA is not requiring secondary containment and UDC for UST systems where

[18] Preamble to 40 CFR part 280, 53 FR 37154, September 23, 1988

installation began on or before 180 days after the effective date of this final UST regulation. 180 days allows owners and operators who have concrete plans for a new UST system or dispenser installation to move forward with their plans before the secondary containment and UDC requirement takes effect. Similar to the definition of existing tank system in the 1988 UST regulation, EPA considers an installation to have begun after the owner or operator applied for or obtained all federal, state, and local approvals or permits and:

- Physical construction or installation began; or
- The owner or operator entered into a contractual agreement that cannot be cancelled or modified without substantial loss and physical construction or installation will commence within a reasonable time frame.

Requiring retrofits of major components would be a significant financial burden for owners and operators. EPA anticipates owners and operators will replace single walled UST systems as they age. When owners and operators replace single walled UST systems after the effective date of the final UST regulation, tanks and piping must be secondarily contained and new dispensers must have UDC.

To implement secondary containment and UDC, EPA is adding new definitions to this final UST regulation. EPA is defining these terms so they are consistent with the definitions contained in EPA's secondary containment grant guidelines to implementing agencies.[19] New definitions in the final UST regulation are:

- Dispenser – This means equipment located aboveground that dispenses regulated substances from the UST system. The 2011 proposed UST regulation defined dispenser system. However, based on comments received, EPA decided to also add the definition

[19] Grant Guidelines To States For Implementing The Secondary Containment Provision Of The Energy Policy Act Of 2005: http://epa.gov/oust/fedlaws/secondco.htm

of dispenser to the final UST regulation.

- Dispenser system – This means the dispenser and the equipment necessary to connect the dispenser to the UST system. As described above, EPA decided to add dispenser to the list of definitions in the final UST regulation for clarity. As a result, EPA shortened the definition of dispenser system in the final UST regulation to account for the new definition of dispenser.
- Replaced – For a tank, this means to remove a tank and install another tank. For piping, it means to remove 50 percent or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run. Commenters suggested adding a definition of replaced as it applies to a dispenser system. However, since EPA is only applying the UDC requirement to new dispenser systems, we are not defining the term replaced as it relates to dispenser systems.
- Secondary containment or secondarily contained – This means a release prevention and release detection system for a tank or piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of piping. The EPAct defines secondary containment as a release detection and prevention system that meets the interstitial monitoring requirement in § 280.43(g). Based on this definition, this final UST regulation includes interstitial monitoring as part of the secondary containment definition. Consistent with the 1988 UST regulation release detection requirements, EPA is requiring interstitial monitoring of new and replaced secondarily contained tanks and piping to occur at least once every 30 days. Some commenters expressed concern about

whether secondary containment included containment sumps. To clarify the definition, EPA is adding language about containment sumps to the secondary containment definition. In addition, EPA is defining containment sump in this final UST regulation. See section B-4, Secondary Containment Tests, for details about this new definition. Several commenters suggested EPA add to the definition of secondary containment a 360 degree containment requirement for tanks. EPA relies on codes of practice developed by nationally recognized associations or independent testing laboratories to determine the degree of containment necessary to be considered secondarily contained. This final UST regulation continues to rely on these codes of practice for determining when the tanks and piping are considered secondarily contained.

- Under-dispenser containment – This means containment underneath a dispenser system designed to prevent leaks from the dispenser and piping within or above the UDC from reaching soil or groundwater. Based on comments received and to provide clarification, EPA is adding piping in the containment sump to the definition.

EPA's secondary containment grant guidelines provide states with significant flexibility to define replaced as it applies to piping. The guidelines require that states, at a minimum, consider replacing piping when 100 percent of piping, excluding connectors, connected to a single UST is removed and other piping is installed. When deciding how to best define replaced as it applies to piping, EPA analyzed state UST regulations for approximately 40 states that currently require secondary containment and interstitial monitoring.[20] About 75 percent of these states have requirements as stringent as, or more stringent than, the 50 percent threshold in this

[20] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

final UST regulation.

In addition, EPA performed a screening analysis using limited, readily available data to determine when repair cost approached replacement cost (and at what point owners and operators were most likely to replace the entire piping run rather than repair it).[21] The screening analysis suggested replacement cost of an entire piping run became equal to repair cost when about 60 percent of a piping run is repaired. Since 60 percent was an approximate screening number, EPA in this final UST regulation is requiring owners and operators to secondarily contain the entire piping run when 50 percent or more of a piping run is replaced. Fifty percent represents half of a piping run, is consistent with most implementing agency decisions, and provides flexibility for allowing repairs while continuing to protect the environment. Fifty percent also prevents owners and operators from leaving small pipe sections in the ground to avoid this secondary containment requirement. If an UST has multiple piping runs, the secondary containment requirement applies independently to each piping run where 50 percent or more of piping is replaced. Currently installed piping runs, and piping runs where less than 50 percent of the piping is repaired, do not require secondary containment.

For pressurized piping, EPA considers a piping run to be the piping that connects the submersible turbine pump (STP) to all of the dispensers fed by that pump. For example, if a tank has two STPs, EPA considers the piping associated with each STP to be separate piping runs. For suction piping, a piping run is the piping that runs between the tank and the suction pump.

Consistent with EPA's current policy, if an owner or operator chooses to reinstall a secondarily contained tank or piping that was previously installed, that tank or piping must meet new tank and piping standards in § 280.20 at the time of installation.

[21] Industrial Economics Incorporated, Work Assignment #1-19, *Methodology and Calculator for Secondary Containment for Piping*, October 3, 2008

EPA is requiring owners and operators install UDC underneath new dispenser systems at UST systems regulated by 40 CFR part 280. Data from release sites show dispensers are one of the leading release sources. [22,23] UDC is located underground and prevents some releases by containing small leaks that occur inside and underneath the dispenser. EPA considers a dispenser system new when owners and operators install both the dispenser and equipment needed to connect the dispenser to an UST system. EPA includes check valves, shear valves, unburied risers or flexible connectors, and other transitional components as equipment that connects a dispenser to an UST system. This equipment is located underneath the dispenser and typically connects underground piping to a dispenser. If an owner or operator replaces a dispenser but uses existing equipment to connect a dispenser to the UST system, then UDC is not required.

To contain small releases from the dispenser, piping, and other equipment, UDC must be liquid tight. This final UST regulation requires UDC be liquid tight on its sides, bottom, and at any penetrations through the containment. EPA is requiring periodic testing of UDC in section B-4, Secondary Containment Tests, if the UDC is used for piping interstitial monitoring. In addition, EPA is requiring annual inspections of containment sumps in section B-1, Walkthrough Inspections, including UDC. Finally, an owner or operator must be able to access and visually inspect the containment. If visual inspection and access are not possible, then owners and operators must periodically monitor UDC (i.e., by electronic monitoring) to ensure it is intact and free of liquids. EPA proposed continuous UDC monitoring if visual inspection and access of the UDC are not possible. However, in guidance to state UST programs about meeting the

[22] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005
[23] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

secondary containment provision of the EPAct, EPA did not require continuous monitoring. Therefore, to provide owners and operators additional flexibility and be consistent with guidance provided to states, this final UST regulation requires periodic monitoring of UDC if access to and visual inspection of the UDC are not possible.

B. *Additional Requirements for Operation and Maintenance*

The 1988 UST regulation required owners and operators install improved UST system equipment to detect and prevent releases; however, it did not require operation and maintenance for all of that equipment. Owners and operators need to properly operate and maintain their UST system equipment in order to prevent and quickly detect releases. Therefore, this final UST regulation adds requirements for periodic walkthrough inspections, spill prevention equipment testing, overfill prevention equipment inspections, containment sump testing, and release detection equipment testing.

When a test or inspection occurs, owners and operators may find problems with the UST system. When a test or inspection indicates a problem, owners and operators must repair the problem to remain in compliance with this final UST regulation. Section 280.33 of this final UST regulation describes repair requirements for UST systems.

1. Walkthrough Inspections

To help EPA determine whether walkthrough inspections will be effective, EPA asked nine states with requirements for periodic walkthrough inspections whether their requirements

are effective.[24] Seven states believe their programs are effective. Two states did not provide input because they had not been implementing their walkthrough inspection programs long enough to evaluate effectiveness. States providing input indicated their walkthrough inspections: identify and resolve problems more quickly; decrease the chance of a potential spill or release; and increase understanding and compliance with the UST regulation. Based on this information and input received from comments on the 2011 proposed UST regulation, EPA thinks walkthrough inspections will be effective in helping prevent and detect releases.

Based on comments EPA received, this final UST regulation requires owners and operators conduct walkthrough inspections as follows:

- Every 30 days:
    - Visually check spill prevention equipment for damage and remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to ensure it is securely on the fill pipe; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area (exception: owners and operators of spill prevention equipment at UST systems receiving deliveries at intervals greater than 30 days may check that equipment prior to each delivery)
    - Check release detection equipment to ensure it is operating with no alarms or unusual operating conditions present and ensure release detection records are reviewed and current
- Annually:
    - Visually check containment sumps for damage and leaks to the containment area

[24] Work Order No. 1004, Task 2, Subtask a – *State Walkthrough Underground Storage Tank Inspections*, SKEO, 1/31/2013

or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled containment sumps with interstitial monitoring, check for a leak in the interstitial area

- Check hand held release detection equipment, such as groundwater bailers and tank gauge sticks, for operability and serviceability

In addition, this final UST regulation allows owners and operators to conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory or according to requirements developed by the implementing agency. The inspections must check equipment in a manner comparable to the walkthrough inspection requirements described above.

This final UST regulation requires owners and operators maintain walkthrough inspection records for one year. Most commenters supported a one year recordkeeping requirement for walkthrough inspections. In addition, the one year recordkeeping time frame is consistent with the recordkeeping requirement for 30 day release detection monitoring. The walkthrough inspection record must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if owners and operators check spill prevention equipment less frequently than every 30 days.

In 2011, EPA proposed to implement the walkthrough inspection requirement on the effective date of the final UST regulation. However, based on comments received and to align implementation of all operation and maintenance requirements, owners and operators must begin conducting walkthrough inspections not later than three years after the effective date of this final UST regulation. This change will make compliance easier and allow owners and operators

ample time to understand their walkthrough inspection responsibilities.

In 2011, EPA proposed requiring owners and operators inspect containment sumps once every 30 days. Many commenters were concerned about inspecting containment sumps every 30 days because of the physical burdens of lifting heavy lids, the potential to ruin seals that prevent water from entering the sump, and the safety of the people performing the inspection in high traffic areas. While EPA thinks frequent containment sump inspections are a valuable part of UST system operation and maintenance, EPA recognizes the concerns raised by commenters and is moving the requirement to conduct containment sump inspections from once every 30 days to annual, which coincides with when owners and operators must open containment sumps to test release detection equipment.

In the 2011 proposed UST regulation, EPA required that hand held release detection equipment be inspected once every 30 days. Based on commenter input, this final UST regulation requires annual inspections of hand held release detection equipment to coincide with other release detection equipment operation and maintenance requirements.

In the 2011proposed UST regulation, EPA required 30 day cathodic protection inspections as part of the walkthrough inspection. Several commenters indicated this frequency conflicted with the 60 day requirement already in the 1988 UST regulation. Based on this input, this final UST regulation keeps cathodic protection inspections at the 60 day interval as required in the 1988 UST regulation. Therefore, owners and operators must continue to perform the 60 day impressed current cathodic protection inspections to ensure equipment is running properly and keep the most recent three records of those inspections.

The 2011 proposed UST regulation required checking monitoring and observation wells every 30 days to make sure they are secure. A few commenters questioned the need to perform

these inspections because owners and operators seldom access these wells unless they are used for release detection or cleanup. EPA agrees with these commenters and also thinks that owners and operators will secure monitoring wells following each 30 day release detection monitoring event or during cleanups as part of their normal compliance activities. Therefore, EPA is not including monitoring and observation wells as part of the periodic walkthrough inspection requirement in this final UST regulation.

EPA received several comments on the 2011 proposed UST regulation recommending treating nonretail UST systems differently than traditional commercial UST facilities because some nonretail UST systems receive infrequent deliveries. Based on the comments, this final UST regulation allows additional flexibility for inspecting spill prevention equipment at UST systems where filling occurs infrequently. In cases where filling activities occur less often than 30 days, owners and operators may inspect spill prevention equipment prior to each delivery, instead of at least once every 30 days. This exception to the spill prevention equipment check for the 30 day walkthrough inspection requirement will still provide appropriate environmental protection because the purpose of this equipment is to catch drips and spills that may occur when the delivery hose is disconnected from the fill pipe. For UST systems receiving infrequent deliveries, inspecting spill prevention equipment before each delivery is adequate.

This final UST regulation retains 30 day inspections of release detection equipment and spill prevention equipment. EPA thinks these inspections are needed at least once every 30 days for release detection to ensure the equipment is operating, check release detection records, and determine whether the tank or piping is leaking. Owners and operators who monitor their release detection system remotely may check the release detection equipment and records remotely as long as the release detection system at the UST system location is determined to be in

communication with the remote monitoring equipment. In addition, 30 day inspections (or before each delivery) of spill prevention equipment will ensure these devices contain small drips and spills that occur when the delivery hose is disconnected from the fill pipe. Based on commenter input, EPA is adding the requirement to check for and remove obstructions in the fill pipe as part of the walkthrough inspection because obstructions in the fill pipe will cause a shutoff device to operate improperly.

EPA is including Petroleum Equipment Institute's Recommended Practice 900, *Recommended Practices for the Inspection and Maintenance of UST Systems*, as a code of practice that may be used to meet the walkthrough inspection requirement in this final UST regulation.[25] This recommended practice includes daily, monthly, and annual inspections for properly maintaining underground storage tank systems. Owners and operators who use the code of practice option for meeting UST requirements must use the entire code of practice. For example, owners and operators would not meet the walkthrough inspection requirement if they chose to follow only some of the walkthrough inspection areas in the code of practice while ignoring others.

This final UST regulation allows flexibility for owners and operators to conduct walkthrough inspections themselves or hire a third party to conduct walkthrough inspections. Although EPA does not require training for owners and operators who conduct these inspections, operators trained in the Class A or B training requirements (see section A-1) should already have adequate knowledge to perform periodic walkthrough inspections.

EPA received multiple comments suggesting we revise the 30 day inspection requirement to be a monthly requirement. After careful consideration, EPA is keeping the 30 day inspection

[25] This document is available for purchase at www.pei.org

requirement. Thirty days provides owners and operators with clarity about the inspection time frame by specifying the maximum number of days between walkthrough inspections. EPA is not moving to monthly inspections because owners and operators could misinterpret monthly and go 60 or more days without conducting a walkthrough inspection. For example, an owner or operator could perform a monthly inspection on January 31, then again on February 1, and then not inspect again until March 31. If an owner or operator continued this practice, six inspections would occur one day apart and six inspections would occur about 60 days apart. While this could be considered inspecting monthly, it is not inspecting consistently on or about the same time each month. EPA wants to ensure the walkthrough inspection frequency is consistent, rather than allow the more inconsistent monthly option in this example. Since 30 days is the average length of a month, EPA's intent with requiring 30 days is to ensure owners and operators conduct walkthrough inspections on or about the same time each month.

Some commenters raised concern about disposing of liquids owners and operators discover during the inspection. For spill prevention equipment and containment sumps to operate as intended, those areas must be free of liquids. In the past, when owners and operators found liquids in those areas, they needed to remove the liquids so the equipment would operate properly (and meet the 1988 UST regulation). This final UST regulation is requiring those areas be inspected periodically; as a result, owners and operators may discover the liquid sooner, but the responsibility to remove the liquid remains the same. EPA expects owners and operators to remove, manage, and dispose of the liquid properly (according to federal, state, and local requirements) as soon as practicable after discovery.

2. Spill Prevention Equipment Tests

In this final UST regulation, EPA is adding a three year testing requirement for spill prevention equipment. This action helps ensure spill prevention equipment will contain small drips and spills when the delivery transfer hose is disconnected from the fill pipe. Owners and operators need to properly operate and maintain their spill prevention equipment in order to prevent releases to the environment. If a small release occurs at the fill port and the spill prevention equipment is not liquid tight, then the release can exit the spill prevention equipment and reach the environment. EPA is aware of various problems with spill prevention equipment. Data show that UST spills account for about 15 percent of releases from UST systems.[26, 27] Examples of problems with spill prevention equipment include damage due to: vehicles driving over the spill prevention equipment; ground movement or freeze and thaw cycles; inadequate installation practices; and normal wear and tear. In addition, the typical life of spill prevention equipment is relatively short – five to eight years according to a South Carolina study.[28, 29] The life span for spill prevention equipment can be even shorter when exposed to more severe weather conditions such as freeze and thaw cycles and plowing following snow events. Because of these factors, periodic spill prevention equipment testing is needed to minimize problems and ensure spill prevention equipment will contain small releases from the delivery hose when disconnected from the fill pipe.

This final UST regulation does not require periodic testing of double walled spill prevention equipment if the integrity of both walls is periodically monitored. Because the

[26] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004
[27] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005
[28] Spill Bucket Performance Presentation by Dale Stoudemire, 2005 UST National Conference, March 14-15 2005, Seattle, WA
[29] Spill Buckets: Mistaken Expectations?, LUSTLine Bulletin 48, Dale W. Stoudemire, November 2004

integrity of both walls is periodically monitored, this type of spill prevention equipment is periodically checked for tightness. In 2011, EPA proposed to exclude from the periodic testing requirement only double walled spill prevention equipment with continuous interstitial monitoring. Several commenters suggested that monitoring of the interstitial area be used in lieu of periodic spill prevention equipment testing. EPA agrees with commenters that double walled spill prevention equipment, where the integrity of both walls is periodically monitored, should not have to undergo testing – as long as owners and operators conduct periodic monitoring of the equipment at a frequency consistent with, or more frequent than, the walkthrough inspection frequency (see section B-1). For example, owners and operators who check vacuum, pressure, or liquid interstitial integrity indicators on double walled spill containment devices as part of their 30 day walkthrough inspections are considered to be periodically monitoring the integrity of both walls.

For spill prevention equipment that must be tested once every three years, this final UST regulation requires owners and operators to conduct testing using vacuum, pressure, or liquid methods. In addition, the test must be conducted in accordance with manufacturer's requirements or a code of practice developed by a nationally recognized association or independent testing laboratory. The manufacturer's requirement is an option only when the manufacturer has developed requirements for testing the tightness of their spill prevention equipment. As of the publication date of this final UST regulation, EPA is aware of one code of practice that contains procedures for testing spill prevention equipment: Petroleum Equipment Institute (PEI) Recommended Practice (RP) 1200, *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST*

Facilities.[30] EPA is adding this code of practice to this final UST regulation. In addition, EPA is providing implementing agencies flexibility to allow other methods they determine to be as protective of human health and the environment as the manufacturer's requirements or a code of practice. This option allows alternatives in case codes of practice and manufacturer's requirements are not available for testing spill prevention equipment. Several commenters expressed concern that EPA did not establish specific pass or fail performance criteria for spill prevention equipment testing. EPA thinks the manufacturer, code of practice, or implementing agency are better suited to establish test method criteria because spill prevention devices are manufactured in different shapes and sizes. Therefore, EPA is relying on the test method to establish specific pass or fail performance criteria.

In 2011, EPA proposed a one year implementation time frame for owners and operators to begin conducting spill prevention equipment testing. However, based on commenter input suggesting implementation be consistent with other testing requirements, EPA is requiring owners and operators of spill containment equipment in use as of the effective date of this final UST regulation conduct the first test no later than three years after the effective date of this final UST regulation. EPA thinks aligning implementation dates for the different operation and maintenance testing requirements to the extent possible will provide clarity about the requirements owners and operators must meet. After the first spill prevention equipment test, owners and operators must test spill prevention equipment at least once every three years.

For UST systems brought into use after the effective date of this final UST regulation, the spill prevention equipment testing requirement applies at installation. However, owners and operators must also follow the installation requirements in § 280.20(d) which require

[30] This document is available for purchase at www.pei.org

manufacturer's instructions and installation standards be followed. These instructions and standards currently address liquid tightness of spill prevention equipment at installation. As long as the spill prevention equipment is tested and liquid tight at installation, the first periodic spill prevention equipment test does not have to be conducted until three years after installation.

In 2011, EPA proposed that owners and operators test spill prevention equipment at least annually. However, based on comments received, EPA is requiring owners and operators test spill prevention equipment at least once every three years. Commenters suggested that all operation and maintenance testing should be aligned so that all tests can be conducted at the same time. EPA agrees. To make it easier for owners and operators to comply, this final UST regulation aligns periodic spill, overfill, and secondary containment testing to the extent possible. Since spill prevention equipment has a relatively short lifespan, EPA thinks a three year testing frequency, when combined with periodic visual checks via the walkthrough inspection (see section B-1), is adequate to ensure spill prevention equipment will contain any drips or spills when the delivery hose is disconnected from the fill pipe.

EPA received significant support for requiring owners and operators to keep records of the spill prevention equipment test for three years. This final UST regulation requires owners and operators maintain records of spill prevention equipment testing for three years for each spill prevention device at the facility. A three year period aligns with the maximum time between on-site UST facility compliance inspections. These records will demonstrate to implementing agencies that the spill prevention equipment was tested and tight at the time of the test.

Owners and operators of UST systems with double walled spill prevention equipment, where the integrity of both walls is periodically monitored and who choose not to conduct spill prevention equipment testing at least once every three years, must maintain documentation

showing that spill prevention equipment has two walls and the integrity of both walls is periodically monitored. Owners and operators must maintain this documentation for as long as the equipment is periodically monitored. Owners and operators who discontinue periodic monitoring of their double walled spill prevention equipment must conduct a test within 30 days of discontinuing the periodic monitoring. EPA considers this necessary because discontinuing periodic monitoring of the interstitial area may mean some portion of that area of the spill prevention equipment may no longer have integrity. Owners and operators need to ensure the primary containment of the spill prevention equipment is tight. Alternatively, owners and operators may choose to test double walled spill prevention equipment once every three years, and maintain the test record, in lieu of periodically monitoring this equipment and maintaining these monitoring records.

Several commenters raised concerns about disposal of the spill prevention equipment test liquid following the test. EPA considered test liquid disposal in this final UST regulation and contacted several vendors to determine whether disposal of the test liquid was included as part of spill prevention equipment testing.[31] Some vendors include handling of the test liquid as part of the test; they carry the test liquid with them and reuse it several times before disposal. Others charge a separate cost to dispose of the test liquid or make sure the owner or operator has drums on site to dispose of the test liquid. In addition, vendors sometimes use vacuum testing for spill prevention equipment testing, which eliminates the liquid from the test.

A few commenters raised concerns about facility down time and replacement costs for spill prevention equipment as a result of testing. EPA acknowledges that, in instances where access to the spill prevention equipment is in the line of traffic, there could be a small amount of

[31] Spill, Overfill, and Secondary Containment testing Questions and Answers from Three Vendors (11/8/12)

facility down time as a result of testing; however EPA thinks the benefit to the environment far outweighs the cost of potential down time. To minimize the effects of down time, owners and operators can also schedule the testing during low traffic times at the facility or when other routine maintenance occurs. EPA expects owners and operators to have properly functioning spill prevention equipment at all times and fix problems when they are discovered. The spill prevention equipment test may uncover a problem earlier, resulting in repair or replacement (and better protection from spills) sooner rather than later, and more quickly detect or prevent releases of regulated substances to the environment.

3. Overfill Prevention Equipment Inspections

In this final UST regulation, EPA is adding periodic operation and maintenance requirements for overfill prevention equipment to help ensure the equipment is operating properly and will activate before an UST is overfilled. Owners and operators need to properly operate and maintain their overfill prevention equipment in order to prevent releases to the environment. If overfill prevention equipment is not working properly, an UST can be overfilled and release product to the environment. EPA is aware that USTs are being overfilled and there are problems with overfill prevention equipment. Data show that tank overfills account for about 15 percent of releases from UST systems.[32, 33] Examples of problems with overfill prevention equipment include: tampering, improper use, and normal wear and tear. Overfill prevention equipment inspections will minimize problems and ensure overfill prevention equipment is

[32] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005
[33] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

operating properly.

The 2011 proposed UST regulation used the term testing for overfill prevention equipment when describing the periodic functionality checks. However, based on input from commenters about potentially overfilling the tank during testing, EPA is using the term inspections – rather than testing – in this final UST regulation. The procedure to determine whether overfill prevention equipment is operating properly should not overfill the tank. Rather, the equipment must be inspected to determine whether it will operate or activate properly according to requirements in this final UST regulation. For example, the inspection to determine whether an automatic shutoff device in the fill pipe will activate at the correct height might involve removing and inspecting the device to ensure it operates as well as measuring the position of the device in the tank to ensure it activates at the appropriate level in the tank.

For overfill prevention equipment inspections, owners and operators must use manufacturer's requirements or a code of practice developed by a nationally recognized association or independent testing laboratory. Manufacturer's requirements are an option only when manufacturers have developed inspection requirements for their overfill prevention equipment that determines the device is set to activate at the appropriate level in the tank and will activate when the regulated substance reaches that level. As of this final UST regulation, EPA is aware of one code of practice that contains procedures for inspecting overfill prevention equipment: PEI RP 1200, *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities*.[34] EPA added this code of practice in this final UST regulation. In addition, EPA is providing implementing agencies flexibility to allow other methods they determine to be as protective of human health

[34] This document is available for purchase at www.pei.org

and the environment as the manufacturer's requirements or a code of practice. This option allows alternatives in case a code of practice and manufacturer's requirements are not available for inspecting overfill prevention equipment.

This final UST regulation requires owners and operators conduct overfill prevention equipment inspections at least once every three years. Commenters generally supported a three year or more frequent inspection cycle. EPA chose the three year time frame because it aligns with three year compliance inspections and is consistent with other operation and maintenance requirements, such as containment sump testing and spill prevention equipment testing.

In 2011, EPA proposed to stagger implementation for overfill prevention equipment inspections over a three year period based on the installation date of the oldest UST at the facility. However, EPA received significant input from commenters opposing the phased in approach and advocating a single implementation date. EPA agrees with the merits of a more simplified approach. Therefore, for overfill prevention equipment installed as of this final UST regulation, owners and operators must conduct the first inspection within three years of the effective date of this final UST regulation. After the first overfill prevention equipment inspection, owners and operators must inspect overfill prevention equipment at least once every three years.

For UST systems brought into use after the effective date of this final UST regulation, the overfill prevention equipment inspection requirement applies at installation. However, owners and operators must also follow the installation requirements in § 280.20(d) which require following manufacturer's instructions and installation standards. These instructions and standards currently address the operability of the overfill equipment at installation. As long as the overfill prevention equipment is inspected for operability at installation, the first periodic

overfill prevention equipment inspection does not have to be conducted until three years after installation.

EPA received significant support for requiring owners and operators to keep records of overfill prevention equipment inspections for three years. The three year period aligns with the maximum time between on-site UST facility compliance inspections. Therefore, this final UST regulation requires owners and operators maintain for three years overfill prevention equipment inspection records for each overfill device at the facility. These records will demonstrate to implementing agencies that the overfill prevention equipment has been inspected, is set at the appropriate height in the tank, and will activate when regulated substances reach that height.

Several commenters were concerned about potential damage to overfill prevention equipment during removal for inspection. EPA asked several vendors who perform overfill prevention equipment inspections about the potential for damage during periodic overfill prevention equipment inspections.[35] The vendors indicated that seals may need to be replaced when removing the equipment, but that overfill prevention equipment itself would not easily be damaged during removal or reinstallation. The vendors also indicated that replacing these seals will result in little or no additional cost to the owner and operator.

A few commenters raised concerns about facility down time and replacement costs for overfill prevention equipment as a result of periodic inspections. EPA acknowledges that, in instances where access to overfill prevention equipment is in the line of traffic, there could be a small amount of facility down time as a result of inspecting; however EPA thinks the benefit to the environment far outweighs the cost of potential down time. To minimize the effects of down time, owners and operators can also schedule the inspection during low traffic times at the

[35] Spill, Overfill, and Secondary Containment testing Questions and Answers from Three Vendors (11/8/12)

facility or when other routine maintenance occurs. EPA expects owners and operators to have properly functioning overfill prevention equipment at all times and fix problems when they are discovered. The overfill prevention equipment inspection may uncover a problem earlier, resulting in repair or replacement (and better protection from overfills) sooner rather than later.

4. Secondary Containment Tests

The 2011 proposed UST regulation included periodic secondary containment testing requirements for secondary containment areas of tanks and piping and for containment sumps used for monitoring the secondary containment areas of piping. However, based on the significant opposition commenters provided, this final UST regulation is not requiring periodic secondary containment testing of secondarily contained tanks and piping. EPA agrees with commenters who indicated secondarily contained UST systems using interstitial monitoring are more protective of the environment than single walled UST systems. In addition, EPA understands that some secondarily contained UST systems installed before this final UST regulation may not have been designed to have the interstitial areas periodically tested. Finally, EPA does not want to create a disincentive for owners and operators to replace older single walled UST systems with secondarily contained systems or penalize early installers of secondarily contained UST systems. However, this final UST regulation does require testing of these areas following a repair or, as appropriate, in response to a suspected release if they are used for interstitial monitoring. Interstitial areas where interstitial monitoring is used need to be tight following a repair so that the interstitial monitoring will detect a release before it reaches the environment. Likewise, interstitial areas need to be tested in response to a suspected release

to determine whether a leak has reached the environment.

EPA disagrees with commenters who suggested periodic testing for containment sumps used for interstitial monitoring of piping is unnecessary. These areas function similar to spill containment equipment, containing leaks from piping and other components in the sump. Containment sumps can degrade over time, resulting in releases to the environment. Information about source and cause of release shows that a significant number of releases occur in containment sump areas.[36,37] Containment sumps have piping and other components that penetrate through the containment sump walls, increasing the likelihood that these areas are not liquid tight. Containment sumps used for interstitial monitoring of piping need to be liquid tight so they will contain regulated substances released from the primary wall of the piping. Therefore, this final UST regulation includes a three year testing requirement for containment sumps used for interstitial monitoring of piping.

This final UST regulation does not require periodic testing of double walled containment sumps used for interstitial monitoring of piping if the integrity of both walls of the containment sump is periodically monitored. Because the integrity of both walls is periodically monitored, this type of containment sump is periodically checked for tightness. EPA proposed to exclude from the periodic testing requirement only containment sumps with continuous interstitial monitoring. Several commenters suggested that periodic monitoring (rather than continuous monitoring) of the interstitial area of the double walled containment sump would be adequate in lieu of performing the periodic containment sump testing. EPA agrees with commenters that double walled containment sumps, where the integrity of both walls is periodically monitored,

[36] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA/OUST, March 2005
[37] *Evaluation Of Releases From New And Upgraded Underground Storage Tanks*, Peer Review Draft, US EPA/OUST, August 2004

should not have to undergo testing – as long as owners and operators conduct periodic monitoring of the equipment at a frequency consistent with, or more frequent than, the walkthrough inspection frequency (see section B-1). For example, owners and operators who check vacuum, pressure, or liquid interstitial integrity indicators on double walled containment sumps as part of their annual walkthrough inspections are considered to be periodically monitoring the integrity of both walls.

This final UST regulation does not require periodic testing of containment sumps used for reasons other than interstitial monitoring of piping. Testing of these areas is not necessary to ensure the release detection will detect a leak because owners and operators are not using the containment sumps for interstitial monitoring. In these cases, owners and operators use another method of release detection and previously installed containment sumps as part of good business practice.

Some commenters suggested EPA add definitions for continuous monitoring and interstitial monitoring. Since this final UST regulation uses the concept of periodic monitoring rather than continuous monitoring, EPA is not defining continuous monitoring. The concept of interstitial monitoring was used in the 1988 UST regulation and remains the same in this final UST regulation (see § 280.43(g)). In addition, this final UST regulation describes interstitial monitoring in detail in subpart D. Therefore, EPA is not further defining interstitial monitoring. Based on commenter input, EPA is adding to this final UST regulation a definition of containment sump, which addresses comments about what constitutes a containment sump. EPA considers a containment sump to be a liquid tight container that protects the environment by containing leaks and spills of regulated substances from piping, dispensers, pumps, and related components in the containment area. Containment sumps may be single walled or secondarily

contained and located at the top of tank (tank top or submersible turbine pump sump), underneath the dispenser (under-dispenser containment sump), or at other points in the piping run (transition or intermediate sump).

This final UST regulation requires owners and operators conduct testing of containment sumps used for interstitial monitoring of piping at least once every three years. Commenters generally supported a three year or more frequent inspection cycle. EPA is choosing the three year time frame to: make compliance easier for owners and operators; align with three year compliance inspections; and be consistent with other operation and maintenance requirements, such as overfill prevention equipment inspections and spill prevention equipment testing.

For containment sumps that require testing at least once every three years, this final UST regulation requires owners and operators conduct testing by using vacuum, pressure, or liquid methods. In addition, the test must be conducted in accordance with manufacturer's requirements or a code of practice developed by a nationally recognized association or independent testing laboratory. The manufacturer's requirement is an option only when the manufacturer has developed testing requirements for their containment sumps that ensure their containment sump is tight. As of this final UST regulation, EPA is aware of one code of practice that contains procedures for testing containment sumps: PEI RP 1200, *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities*, and is adding this code of practice to the final UST regulation.[38] In addition, EPA is providing implementing agencies flexibility to allow other methods they determine to be as protective of human health and the environment as the manufacturer's requirements or a code of practice. This option allows alternatives in the event that a code of

[38] This document is available for purchase at www.pei.org

practice and manufacturer's requirements are not available for testing containment sumps. Several commenters expressed concern that EPA did not establish specific pass or fail performance criteria for containment sump testing. However, EPA thinks the test method established by the manufacturer, code of practice, or implementing agency are better suited to establish criteria because containment sumps are made in different shapes and sizes. Therefore, EPA is relying on the test method to establish specific pass or fail performance criteria.

In 2011, EPA proposed to stagger secondary containment testing implementation over a three year period, based on the installation date of the oldest UST at a facility. However, EPA received significant input from commenters opposing a phased in approach and advocating a single implementation date. EPA agrees with the merits of a more simplified approach. Therefore, containment sumps used for interstitial monitoring of piping installed as of the effective date of this final UST regulation must be tested within three years of the effective date of this final UST regulation. After the first test, owners and operators must conduct periodic testing at least once every three years.

For UST systems brought into use after the effective date of this final UST regulation, the containment sump testing requirement applies at installation. However, owners and operators must also follow the installation requirements in § 280.20(d) which require following manufacturer's instructions and installation standards. These instructions and standards currently address liquid tightness of containment sumps at installation. As long as the containment sump is tested and liquid tight at installation, the first periodic containment sump test does not have to be conducted until three years after installation.

EPA received significant support for the three year recordkeeping time frame for secondary containment testing because the three year time period aligns with the maximum time

between on-site UST facility compliance inspections. Therefore, this final UST regulation requires owners and operators maintain for three years containment sump testing records for each containment sump used for interstitial monitoring at a facility. These records will demonstrate to implementing agencies that containment sumps were tested and tight at the time of the test.

Owners and operators who have double walled containment sumps where the integrity of both walls is periodically monitored and choose not to conduct containment sump testing at least once every three years must maintain documentation showing their containment sumps have two walls and the integrity of both walls is periodically monitored. Owners and operators must maintain this documentation for as long as the integrity of the two walls of the containment sump is periodically monitored. Owners and operators who discontinue periodic monitoring of their double walled containment sumps must conduct a test within 30 days of discontinuing the periodic monitoring. EPA considers this necessary because discontinuing periodic monitoring of the interstitial area may mean some portion of that area of the containment may no longer have integrity. Therefore, owners and operators need to ensure the primary containment of the containment sump is tight. Alternatively, owners and operators may choose to test double walled containment sumps (and maintain testing records) once every three years in lieu of maintaining these records.

Several commenters raised concern about disposing of containment sump test liquid following the test. EPA considered test liquid disposal in this final UST regulation and contacted several vendors to determine whether they included disposal of test liquid as part of containment sump testing.[39] Some vendors include handling of the test liquid as part of the test; they carry

[39] Spill, Overfill, and Secondary Containment testing Questions and Answers from Three Vendors (11/8/12)

the test liquid with them and reuse it several times before disposal. Others charge a separate cost to dispose of the test liquid or make sure the owner or operator has drums on site to dispose of the test liquid. In addition, vendors could use vacuum testing for containment sump testing, which eliminates the liquid from the test.

A few commenters raised concerns about facility down time and replacement costs for containment sumps as a result of testing. EPA acknowledges that, in instances where access to the containment sump is in the line of traffic, there could be a small amount of facility down time as a result of testing; however EPA thinks the benefit to the environment far outweighs the cost of potential down time. To minimize the effects of down time, owners and operators can also schedule the testing during low traffic times at the facility or when other routine maintenance occurs that requires opening containment sumps. EPA expects owners and operators to have properly functioning containment sumps at all times when those containment sumps are used for interstitial monitoring of piping and fix problems when they are discovered. The containment sump test may uncover a problem earlier than if a test was never conducted, resulting in repair or replacements of the containment sump (and better protection from releases) sooner rather than later.

5. Release Detection Equipment Tests

This final UST regulation requires UST owners and operators perform annual operation and maintenance tests on electronic and mechanical components of their release detection equipment to ensure the equipment is operating properly. Owners and operators are required, at a minimum, to check this equipment:

- Automatic tank gauge (ATG) systems and other controllers
    - Test alarm
    - Verify system configuration
    - Test battery back-up
- Probes and sensors
    - Inspect for residual build-up
    - Ensure floats move freely
    - Ensure shaft is not damaged
    - Ensure cables are free of kinks and breaks
    - Test alarm operability and communication with controller
- Automatic line leak detector (ALLD)
    - Simulate leak which determines capability to detect a leak
- Vacuum pumps and pressure gauges
    - Ensure proper communication with sensors and controller
- Handheld electronic sampling equipment associated with vapor and groundwater monitoring
    - Ensure proper operation

This final UST regulation changes some requirements discussed in the 2011 proposed operation and maintenance for release detection equipment requirements. Changes include:

- Noting that PEI RP 1200 may be used to meet the testing requirements
- Increasing from one year to three years the time allowed for UST system owners and operators to implement the requirements
- Using the term automatic line leak detector instead of line leak detector

- Removing the leak sensing O-ring from the list of components tested
- Adding handheld electronic equipment associated with vapor and groundwater monitoring

EPA is concerned about the performance of release detection equipment. Inspectors routinely find release detection equipment installed on UST systems, but often that equipment is not properly operated or maintained. In addition, information from an analysis in Florida indicates that leak detection successfully detected 26 percent of all releases. Conversely, leak detection was specifically identified as failing to detect 23 percent of releases.[40] To increase the effectiveness of release detection, this final UST regulation targets operation and maintenance.

This final UST regulation requires that release detection is operated and maintained in accordance with manufacturer's instructions, a code of practice, or requirements developed by the implementing agency. To achieve optimal performance from equipment and to meet release detection requirements, it is important for UST system owners and operators to both install the equipment properly and properly operate and maintain it. In the 1988 UST regulation, EPA did not provide specifics on the minimum requirements to ensure adequate operation and maintenance of release detection equipment. As a result, manufacturer operation and maintenance requirements vary greatly, even among similar types of equipment.

Some manufacturer's requirements do not adequately address operation and maintenance. For example, some manufacturers only recommend operation and maintenance testing; but EPA is taking the position that testing should be mandatory instead of optional. In addition, similar release detection components should be tested in a similar manner, which will increase the likelihood all release detection equipment will function at optimal levels for as long as possible.

[40] *Petroleum Releases At Underground Storage Tank Facilities In Florida*, Peer Review Draft, US EPA-OUST, March 2005

California's in field analysis of sensors used for release detection supports EPA's position.[41]

This final UST regulation improves and standardizes operation and maintenance for all release detection equipment; it provides owners and operators with required equipment tests, which will help ensure equipment is properly operated and maintained. EPA is requiring a set of minimum operation and maintenance criteria that owners and operators must follow for electronic and mechanical based release detection equipment.

The operation and maintenance minimum requirements for release detection established in This final UST regulation are based on common requirements and recommendations by various equipment manufacturers of similar equipment. EPA used the National Work Group On Leak Detection Evaluations' (NWGLDE) list of leak detection equipment to identify commonly used equipment.[42] In addition, EPA's publication, *Operating And Maintaining Underground Storage Tanks Systems: Practical Help And Checklists* and PEI's *Recommended Practices for the Inspection and Maintenance of UST Systems* (RP 900) also helped establish proper operation and maintenance activities.

Owners and operators must meet the release detection operation and maintenance requirements according to one of the following: manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the implementing agency to be no less protective of human health and the environment than the two options listed above. These requirements are consistent with options for other operation and maintenance activities in this final UST regulation. As an example, see section B-2, Spill Prevention Equipment Tests.

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[41] California's *Field Evaluation Of Underground Storage Tank System Leak Detection Sensors*, August 2002. http://www.waterboards.ca.gov/water_issues/programs/ust/leak_prevention/sensors/index.shtml

[42] National Work Group On Leak Detection Evaluations' *List Of Leak Detection Evaluations For Storage Tank Systems*. http://www.nwglde.org/

At the time of the 2011 proposed UST regulation, PEI was developing a code of practice, which EPA anticipated would address operability testing of release detection equipment. PEI issued the final recommended practice in 2012. EPA reviewed PEI's final *Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities* (RP 1200) and is including it in this final regulation as an option for meeting the annual release detection equipment testing requirements.[43]

This final UST regulation requires owners and operators maintain records of the annual operation tests for three years. At a minimum, records must: list each component tested; indicate whether each component meets the criteria listed or needed to have action taken; and describe any action taken to correct an issue. The requirement to maintain records for three years is consistent with the three year compliance inspection cycle; maintaining records will allow owners and operators to demonstrate compliance with this operation and maintenance requirement.

Based on comments received and EPA's goal to align all implementation dates for consistency and easier compliance, this final UST regulation requires owners and operators meet operation and maintenance for release detection requirements no later than three years after the effective date of the final UST regulation. This is a change from the 2011 proposed UST regulation, which required that owners and operators meet this requirement no later than one year after the effective date of the final UST regulation.

The 2011 proposed UST regulation used the term line leak detector as a component that must be tested. Based on comments received, this final UST regulation uses the term automatic line leak detector. This is consistent with how EPA has historically referenced line leak

[43] This document is available for purchase at www.pei.org

detectors in the 1988 UST regulation. These devices can be electronic or mechanical and are described in § 280.44(a). Commenters also asked EPA to add the performance criteria of 3 gallons per hour at 10 pounds per square inch line pressure to the simulated ALLD test required for the line leak detector. This is unnecessary since the 2011 proposed UST regulation required this performance standard for the simulated test by referencing § 280.44(a). This final UST regulation maintains that ALLDs, whether electronic or mechanical, must meet the annual simulated leak test of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour.

One commenter noted his experience with testing release detection equipment, which verified electrical circuitry, but during operation the connected device still did not function to its intended precision. This commenter recommended EPA change the term test to functionality test. EPA thinks this change is unnecessary. The operation and maintenance requirements for release detection feature minimum performance criteria for testing. Each method used to meet the requirement (manufacturer's instructions, a code of practice, or requirements developed by the implementing agency) must, at a minimum, cover each listed component and the stated performance criteria.

EPA disagrees with the commenter who said EPA should allow self-diagnostic equipment. Similar to the commenter in the previous paragraph, EPA is concerned that self-diagnostic equipment might verify electrical circuitry or communication, but not actually test equipment functionality. EPA requires testing to be performed in a manner that verifies equipment operation according to performance standards provided for each piece of release detection equipment. For example, testing ALLDs must involve simulating a system leak not greater than 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour, or equivalent. ALLDs connected to ATG systems or other controllers may themselves be used to

test electronic communication, but unless capable of simulating an appropriate leak in the system, do not meet the performance standard and, therefore, cannot be used to meet this requirement.

In this final UST regulation, EPA is deleting language from the 2011 proposed UST regulation about inspecting and testing the leak sensing O-ring. Commenters requested EPA clarify what a leak sensing O-ring is. This O-ring is specific to the functional element of mechanical line leak detectors and is, therefore, only present on certain types of ALLDs. In addition, all functional elements will be tested as part of the simulated leak test conducted at 3 gallons per hour at 10 psi or equivalent for all ALLDs.

This final UST regulation allows use of groundwater and vapor monitoring as methods of release detection, but with some restrictions (see section D-6). For owners and operators choosing groundwater or vapor monitoring as their method of release detection, this final UST regulation requires that hand held electronic devices such as photoionization devices meet the operation and maintenance requirements for release detection equipment. Non electronic hand held devices, such as measuring sticks and groundwater bailers, are covered in section B-1, Walkthrough Inspections.

C. *Addressing Deferrals*

This final UST regulation addresses airport hydrant fuel distribution systems and USTs with field-constructed tanks. In addition, this final UST regulation removes the release detection deferral for UST systems that store fuel solely for use by emergency power generators. As a result, these UST systems may no longer be subject to Spill Prevention, Control, and

Countermeasure (SPCC) requirements. Finally, this final UST regulation partially excludes from Part 280 requirements wastewater treatment tank systems, UST systems containing radioactive material regulated under the Atomic Energy Act, and UST systems that are part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50. To the extent these systems were regulated by the SPCC requirements, they will continue to be regulated by those requirements.

In this final UST regulation, EPA partially excludes from part 280 requirements the aboveground storage tanks associated with airport hydrant fuel distribution systems and USTs with field-constructed tanks. These aboveground storage tanks are part of the UST system, but are excluded from most of this final UST regulation because they are not underground. At the time of the 1988 UST regulation, facilities with an aggregate completely buried storage capacity greater than 42,000 gallons and located near navigable waters of the United States or adjoining shorelines were subject to both UST regulations and SPCC regulations. Since then, the SPCC regulation has been amended and exempts completely buried storage tanks, as well as connected underground piping, underground ancillary equipment, and containment systems when fully subject to the technical requirements of 40 CFR part 280. Partially excluded aboveground storage tanks which are part of the UST system may be subject to SPCC requirements.

1. UST Systems Storing Fuel Solely for Use by Emergency Power Generators – Require Release Detection

This final UST regulation eliminates the deferral for UST systems storing fuel solely for use by emergency power generators (also referred to as emergency generator tanks). This means

emergency generator tanks are no longer deferred from release detection requirements in 40 CFR part 280, subpart D and are subject to all UST requirements.

This final UST regulation requires owners and operators of UST systems storing fuel solely for use by emergency power generators begin meeting these requirements:

- For systems installed after the effective date of this final UST regulation, at the time of installation
- For systems installed on or before the effective date of this final UST regulation, within three years of the effective date of this final UST regulation

EPA is regulating UST systems storing fuel solely for use by emergency power generators because the rationale in the 1988 UST regulation for deferring release detection no longer applies. To allow time for developing workable release detection requirements, EPA in the 1988 UST regulation deferred release detection requirements for UST systems storing fuel solely for use by emergency power generators. The 1988 UST regulation preamble indicated that monthly monitoring requirements were unworkable because these tanks often were located at unmanned stations in remote areas and visited infrequently.

EPA always intended for these systems to meet release detection requirements when appropriate release detection methods became available. Since the 1988 UST regulation, release detection technologies have matured greatly. In addition, technology is now available to perform release detection at remote sites. Emergency generator tanks can now be monitored for releases by the majority of methods listed in subpart D. EPA estimates about 30 percent of emergency generator tanks already have release detection.

Effective remote monitoring methods for release detection are now available and currently used to monitor unmanned UST systems storing fuel solely for emergency generator

tanks. Numerous companies perform remote monitoring for releases at these unmanned sites. When there is a suspected release, a remote monitor transmits a visual or audible alarm to a receiving console at a manned location. This provides owners and operators with real-time release detection data so owners and operators can quickly respond to suspected releases at sites with unmanned emergency generator tanks.

Several commenters raised concerns that release detection methods may not properly operate on some emergency generator tanks and suggested changes to the release detection requirement. Commenters reported these issues:

- Looped piping systems, which is piping configured to run continuously with integrated supply and return lines, cannot be properly isolated or does not have a sufficient quiet period to perform a precision test when using automatic tank gauging
- Emergency generator tanks with copper piping may pose issues with meeting the release detection requirement due to system configurations
- Most emergency generator tanks are single walled and are limited to automatic tank gauging as the form of release detection
- Emergency generator tanks with day tanks and aboveground piping may need anti-siphon valves

Other commenters suggested EPA limit the type of release detection, such as statistical inventory reconciliation (SIR), owners and operators may use on emergency generator tanks and that EPA should require owners and operators install electronic line leak detectors, which have a positive system shutdown of any product flow in the event of a leak. Other commenters recommended EPA clarify that automatic line leak detectors can go to alarm mode only and not shut down or restrict product flow when a leak is suspected in emergency generator tanks used

during a crisis.

EPA agrees that not all release detection methods may be suitable for all configurations of emergency generator tanks. EPA discussed the applicability of SIR on emergency generator tanks in general with several SIR vendors and received conflicting responses. A challenge to performing release detection is establishing a usage rate of product based on the run time of the system during operation. Although EPA thinks it is difficult to achieve accurate results, we do not have enough information at this time to determine that SIR or other methods that rely on metered data are unacceptable for use on emergency generator tanks. Owners and operators must carefully consider whether these methods meet the release detection requirement for their UST systems. To meet the release detection requirement, some systems may require reconfiguration and addition of components such as anti-siphon valves to separate sections of the system. Some emergency generator tanks use safe suction piping, in which case release detection for piping is not required. However, release detection technologies have advanced since EPA issued the 1988 UST regulation and there are now various options available to meet this requirement. EPA understands some commenters want to require owners and operators to install automatic line leak detectors, which only shut off at the STP or allowing only certain release detection methods for these systems. However, to provide flexibility to owners and operators while continuing to protect human health and the environment, this final UST regulation allows owners and operators to choose the most appropriate release detection methods, including automatic line leak detectors that trigger an alarm only and not necessarily shut down the pump, for their systems. For an unmanned facility, the alarm must be transmitted to a monitoring center where someone can hear or see the alarm and quickly respond to a suspected release.

One commenter suggested EPA define what is mission critical as it relates to emergency generator tanks. While EPA acknowledges the need for operating emergency generator tanks during an emergency, we think it is unnecessary to define the term mission critical or make exceptions for the release detection requirement for these tanks. The concern is that owners and operators of these systems should not have to shut down their systems during an emergency if they encounter a suspected release. EPA understands this concern but thinks owners and operators can perform release detection and respond to suspected releases while continuing to operate the UST system.

Emergency generator tanks are located throughout the country. EPA's review of several state databases revealed these systems are located at hospitals, universities, communication utilities, military installations, and other locations relying on backup power sources. Based on information from these databases, EPA estimates UST systems storing fuel solely for use by emergency power generators represent approximately 3 percent of the active tank population.

Additionally, about 20 states currently require release detection for emergency generator tanks. Automatic tank gauging and secondary containment with interstitial monitoring are the most common release detection methods used for emergency generator tanks. Line tightness testing, automatic line leak detectors, or secondary containment with interstitial monitoring are the most common release detection methods used for piping. With technology now available to detect releases from emergency generator tanks and because they pose a risk to human health and the environment, this final UST regulation removes the deferral from release detection.

The 2011 proposed UST regulation required owners and operators meet the release detection requirement within one year of the effective date of the final UST regulation. Several commenters raised concerns that a one-year time frame to meet this requirement is insufficient

for owners and operators to assess, budget, and install release detection. Commenters also wanted EPA to establish a single implementation date, which is consistent with effective dates for release detection on other previously deferred tanks. EPA agrees that extending the time frame will allow owners and operators sufficient time for planning and installing necessary equipment to meet the release detection requirement; but we disagree with commenters who suggested a five to ten year implementation date. EPA also agrees that establishing a single effective date, which is consistent with other effective dates for the release detection requirement, decreases the tracking burden on implementing agencies as well as owners and operators. Based on support for increasing the final implementation date for release detection from one year and EPA's goal of aligning regulatory implementation dates to make compliance easier for owners and operators, EPA is requiring owners and operators of emergency generator tanks installed on or before the effective date of this final UST regulation to meet the release detection requirement within three years of the effective date of this final UST regulation. Emergency generator tanks installed after the effective date of this final UST regulation must meet the release detection requirements when installed.

The 2011 proposed UST regulation required that no later than 30 days after the effective date of the final UST regulation, owners of UST systems storing fuel solely for use by emergency power generators notify implementing agencies that their systems exist. Commenters stated that this requirement is unnecessary because the 1988 UST regulation excluded emergency generator tanks from only the release detection requirement. EPA agrees with commenters. This final UST regulation does not include this one-time notification requirement for emergency generator tanks.

2. Airport Hydrant Fuel Distribution Systems and UST Systems with Field-Constructed Tanks

This final UST regulation removes the 1988 deferral and requires owners and operators of airport hydrant fuel distribution systems (referred to as airport hydrant systems) comply with applicable requirements. However, EPA is tailoring the requirements to the unique nature of airport hydrant systems. Airport hydrant systems function and are designed differently than conventional USTs. Unlike conventional USTs, airport hydrant systems consist of networks of large diameter underground piping operating at high pressures to deliver fuel to aircraft. In addition, operation and maintenance requirements for airport hydrant systems may differ from those for conventional UST systems.

This final UST regulation removes the 1988 deferral and requires owners and operators of UST systems with field-constructed tanks comply with applicable requirements. Similar to airport hydrant systems, EPA is tailoring the requirements to the unique nature of field-constructed tanks. UST systems with field-constructed tanks (referred to as field-constructed tanks) range from conventional sizes to very large capacities greater than 2 million gallons.

A few commenters suggested EPA write regulations specifically for airport hydrant systems and field-constructed tanks, since they are distinctly different from conventional USTs. EPA agrees that airport hydrant systems and field-constructed tanks are different from conventional USTs. Additionally, EPA thinks it would help owners and operators if the requirements for airport hydrant systems and field-constructed tanks are in a separate subpart of the final UST regulation. In order to help owners and operators of these systems comply, this final UST regulation adds subpart K (*UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems*) and places most regulatory requirements for both airport

hydrant systems and field-constructed tanks in one location. Since 1988, owners and operators of these systems have been required to comply with the requirements for subparts A (*Program Scope and Interim Prohibition*) and F (*Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances*).

This final UST regulation requires airport hydrant systems and field-constructed tanks installed on or before the effective date of the final UST regulation begin meeting the requirements of subpart K according to the schedule below. Airport hydrant systems and field-constructed tanks installed after the effective date of this final UST regulation must meet the requirements at the time of installation.

Requirement	Effective Date
Upgrading UST systems, general operating requirements, and operator training	Three years after the effective date of this final UST regulation
Release detection	Three years after the effective date of this final UST regulation
Release reporting, response, and investigation; closure; financial responsibility and notification, except as provided in § 280.251(2)(b)	On the effective date of this final UST regulation

This final UST regulation modifies the 2011 proposed UST regulation by revising the definition of airport hydrant fuel distribution system and defining a field-constructed tank.

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

A field-constructed tank is defined as a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed.

Overview of Actions

Release Detection—Tanks

This final UST regulation requires airport hydrant system tanks and field-constructed tanks meet these requirements:

- These tanks must be monitored using release detection methods specified in subpart D:
    - Shop fabricated tanks and
    - Field-constructed tanks with a capacity less than or equal to 50,000 gallons
- Field-constructed tanks with a capacity greater than 50,000 gallons must either be monitored using release detection methods specified in subpart D (except tanks using groundwater and vapor monitoring must combine that method with inventory control as described in the alternatives below) or use one of the alternatives below
    - Conduct an annual tank tightness test that can detect a 0.5 gallon per hour (gph) leak rate
    - At least once every 30 days, use an automatic tank gauging system to perform release detection, which can detect a leak rate of 1 gallon per hour or less; and at least once every three years, use a tank tightness test that can detect a 0.2 gallon per hour leak rate

- At least once every 30 days, use an automatic tank gauging system to perform release detection, which can detect a leak rate of 2 gallons per hour or less; and at least every two years, use a tank tightness test that can detect a 0.2 gallon per hour leak rate
- At least every two years, perform vapor monitoring (conducted according to § 280.43(e) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate
- At least every 30 days, perform inventory control, conducted according to Department of Defense (DoD) Directive 4140.25; Air Transport Association (ATA) Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures that can detect a leak equal to or less than 0.5 percent of flow through and either
    - At least every two years, perform a tank tightness test that can detect a 0.5 gallon per hour leak rate or
    - At least every 30 days, perform vapor monitoring or groundwater monitoring (conducted according to § 280.43(e) or (f), respectively, for the stored regulated substance)

The implementing agency may approve another method of release detection if the owner or operator can demonstrate the method can detect a release as effectively as any of methods listed above. In comparing methods, the implementing agency shall consider the size of release the method can detect and frequency and reliability of detection.

Release Detection – Piping

Underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in subpart D of the final UST regulation.

Underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must meet these requirements:

- Piping must be monitored using release detection methods specified in subpart D, except that piping using groundwater and vapor monitoring must combine that method with inventory control as described in the alternatives below, or
- Use one of these alternatives
    - Perform a semiannual or annual line tightness test at or above operating pressure according to the table below

Maximum Leak Detection Rate Per Test Section Volume		
Test Section Volume (Gallons)	Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)	Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)
< 50,000	1.0	0.5
≥ 50,000 to < 75,000	1.5	0.75
≥ 75,000 to < 100,000	2.0	1.0
≥ 100,000	3.0	1.5

Piping segment volumes greater than or equal to 100,000 gallons, which are not capable of meeting the 3 gallons per hour leak rate for semiannual testing, may be tested at a leak rate up to 6 gallons per hour according to this schedule:

Phase In For Piping Segments ≥ 100,000 Gallons In Volume	
First test	Not later than three years after the effective date of this final UST regulation (may use up to 6 gph leak rate)
Second test	Between three and six years after the effective date of this final UST regulation (may use up to 6 gph leak rate)

Third test	Between six and seven years after the effective date of this final UST regulation (must use 3 gph leak rate)
Subsequent tests	Beginning seven years after the effective date of this final UST regulation, use semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above

- At least every two years, perform vapor monitoring according to § 280.43(e) for a tracer compound placed in the tank system capable of detecting a 0.1 gallon per hour leak rate
- At least every 30 days, perform inventory control, conducted according to DoD Directive 4140.25, ATA Airport Fuel Facility Operations and Maintenance Guidance Manual, or equivalent procedures, that can detect a leak equal to or less than 0.5 percent of flow through and either
  - At least every two years, perform a line tightness test using the leak detection rate for the semiannual test in § 280.252(d)(2(i) or
  - At least every 30 days, perform vapor monitoring or groundwater monitoring (conducted according to § 280.43(e) or (f), respectively, for the stored regulated substance) or

- The implementing agency may approve another method of release detection if the owner or operator can demonstrate that the method can detect a release as effectively as any of the methods listed above; in comparing methods, the implementing agency shall consider the size of release the method can detect and the frequency and reliability of detection.

Release Prevention

This final UST regulation requires airport hydrant systems and field-constructed tanks meet corrosion protection, spill, overfill, and walkthrough inspection requirements. Corrosion protection installed on airport hydrant systems and field-constructed tanks must meet either:

- New tank and piping standards described in § 280.20, except that new and replaced hydrant piping and piping associated with field-constructed tanks greater than 50,000 gallons need not be secondarily contained or
- Airport hydrant systems and field-constructed tanks installed on or before the effective date of the final UST regulation must either meet the corrosion protection upgrade requirements in § 280.252(b)(1) or the new tank and piping standards described above

Airport hydrant systems and field-constructed tanks installed on or before the effective date of the final UST regulation that are not upgraded according to § 280.252(b) within three years of the effective date of the final UST regulation must be permanently closed according to subpart G. The presence of an internal lining does not meet the corrosion protection upgrade requirement.

Owners and operators of airport hydrant systems and field-constructed tanks must install spill and overfill prevention equipment and meet the periodic spill testing and overfill inspection requirements of § 280.35. Owners and operators must install the equipment and conduct the first spill test and overfill inspection no later than three years after the effective date of this final UST regulation and every three years thereafter. For airport hydrant systems brought into use after the effective date of this final UST regulation, spill and overfill prevention equipment requirements must be met at installation.

Owners and operators must conduct walkthrough inspections that meet the requirements of § 280.252(c). Owners and operators must conduct the first inspection within three years after

the effective date of the final UST regulation. In addition to the items inspected as part of the walkthrough inspection for other regulated UST systems, owners and operators of airport hydrant systems must inspect hydrant pits and hydrant piping vaults every 30 days for areas that do not require confined space entry according to the Occupational Safety and Health Administration (OSHA) and annually for areas that do require confined space entry. Owners and operators must keep documentation of the inspection according to § 280.36(b).

Notification

This final UST regulation requires owners and operators of regulated airport hydrant systems and field-constructed tanks meet these notification requirements:

- For airport hydrant systems and field-constructed tanks currently installed, owners and operators must submit no later than 3 years after the effective date of this final UST regulation a one-time notification to their implementing agency that their systems exist
- For airport hydrant systems and field-constructed tanks installed after the effective date of the final UST regulation, owners and operators must provide their implementing agency a notification of each newly installed system within 30 days of bringing each system into use
- Owners must provide their implementing agency a notification of ownership change for each newly acquired airport hydrant system or field-constructed tank within 30 days of the date on which the new owner assumes ownership

Financial Responsibility

This final UST regulation requires owners and operators of airport hydrant systems and field-constructed tanks that have not been permanently closed meet the financial responsibility requirements in subpart H at the time the one-time notification of existence is submitted to the implementing agency. Owners and operators who install these systems after the effective date of this final UST regulation must meet the financial responsibility requirements at installation. This requirement does not apply to state or federal owners of airport hydrant systems and field-constructed tanks.

Partially Excluded Components

This final UST regulation excludes aboveground storage tanks associated with airport hydrant systems and field-constructed tanks from the requirements of subparts B, C, D, E, G, J, and K. Owners and operators are still required to comply with subparts A (*Program Scope and Installation Requirements for Partially Excluded UST Systems*); and F (*Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances*) for these tanks.

Operator Training

This final UST regulation requires owners and operators of airport hydrant systems and field-constructed tanks meet the operator training requirements in subpart J.

Closure Requirements for Previously Closed Tanks

When directed by the implementing agency, owners and operators of airport hydrant systems and field-constructed tanks permanently closed before the effective date of this final UST regulation must assess the excavation zone and close the UST system according to subpart G if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.

Background

Tanks and piping associated with airport hydrant systems and field-constructed tanks can store millions of gallons of fuel and handle large volumes of regulated substances on a daily basis. Leaks from these systems can contaminate subsurface soil beneath the airport apron and runways, groundwater, and nearby surface water systems, posing a significant risk to human health and the environment. As a result, EPA is removing the deferral.

Some commenters indicated EPA needed to justify that airport hydrant systems and field-constructed tanks are leaking in order to regulate them. The 1988 UST regulation required owners and operators report only confirmed releases from these tanks to implementing agencies. Owners and operators were not required to report suspected releases to implementing agencies, which sometimes resulted in gaps for ensuring proper site investigations or transmission of sufficient release information. As a result, implementing agencies have little to no available historical records regarding releases of regulated substances from airport hydrant systems and field-constructed tanks.

In the 2011 proposed UST regulation, EPA provided details on several releases that previously occurred at airport hydrant systems. Since that time, EPA identified additional information on releases from both DoD and commercial airport hydrant systems. For example, at Hartsfield Jackson International Airport in Georgia, active remediation and free product recovery is ongoing (as of 2014) due to a 1988 release of an estimated 14,000 gallons of jet fuel.[44] In 2003, an estimated 100,000 gallons of jet fuel leaked from the valves and flanges of an airport hydrant system at Minneapolis-St. Paul International Airport in Minnesota. Some of the jet fuel was released into the sanitary sewer and nearby waterway. During the investigation of the jet fuel release, personnel discovered a second jet fuel leak at a different concourse; this leak impacted the stormwater system and produced oily sheens in the Minnesota River. Responsible parties agreed to pay civil penalties and complete environmental projects, including continued site remediation and fuel recovery.[45] In 1983 at Camp Lejeune, North Carolina, investigators discovered multiple feet of free product while using a hand auger to investigate the cause of a fuel inventory discrepancy.[46] In addition, from the 1960s to the 1980s, thousands of gallons of jet fuel leaked from a former airport hydrant system at Pope Air Force Base, North Carolina. At one time, it was noted that as much as 75,000 gallons of free product was floating on top of the groundwater because of these releases. As of 2014, the site is undergoing remediation.[47] In addition, at Marine Corps Air Station Cherry Point, North Carolina there have been multiple releases from the airport hydrant system underground piping. The station was cited twice in the 1990s for contaminating soil and groundwater under this fuel facility due to leaking tanks or fuel

[44] Corrective Action Plan – Part B: Hartsfield-Jackson International Airport, Concourse Pit. Number 19 Fuel Spill
[45] http://www.pca.state.mn.us/index.php/about-mpca/mpca-news/current-news-releases/news-release-archive-2005/airport-agrees-to-pay-$540000-for-environmental-violations.html?nav=0
[46] http://www.tftptf.com/New_ATSDR3/RR_DRAFT_RAO.pdf
[47] Federal Remediation Technologies Roundtable Abstracts of Remediation Case Studies, Volume 3 http://epa.gov/tio/download/frtr/abstractsvol3.pdf

spills. An extensive environmental remediation effort is underway in 2014 to clean this site. Contamination from many of the releases combined and migrated to form a single plume.

In the 2011 proposed UST regulation, EPA also provided details on several previous releases that occurred from field-constructed tanks. Since that time, EPA identified additional anecdotal information on releases from field-constructed tanks. At Adak Island, Alaska's Tank Farm A, records show fuel was released at various times from 21,000 to 420,000 gallon field-constructed tanks and piping. As of 2014, all tanks have been removed, but the former fuel farm is still undergoing remediation through long term monitoring and monitored natural attenuation.[48] Also at Adak Island, an overfill during a fuel transfer caused 142,800 gallons of diesel fuel to leak from a 4.8 million gallon underground field-constructed tank into the immediate and surrounding environment, causing harm to native wildlife.[49]

Releases can have a major impact on human health and the environment. Release prevention equipment, regular release detection tests, operator training, periodic walkthrough inspections, and proper operation and maintenance are keys to preventing and quickly identifying releases before they contaminate the surrounding environment. This final UST regulation adds these requirements for airport hydrant systems and field-constructed tanks in order to help prevent and quickly detect leaks from these systems into the environment.

Definition of an Airport Hydrant System

The 1988 UST regulation did not provide a definition for airport hydrant system. In the 2011 proposed UST regulation, EPA provided a definition of an airport hydrant system to clarify

[48]Tank Farm A http://dec.alaska.gov/Applications/SPAR/CCReports/Site_Report.aspx?Hazard_ID=686
[49] http://www.darrp.noaa.gov/northwest/adak/pdf/ADAK_DARPEA_FINAL_Draft%20PDF.pdf

what components would be regulated. However, that definition was based on an airport hydrant system that received fuel at a single delivery point, designed with all components operating in tandem, and included only the immediate piping and tank directly feeding the airport hydrant piping. To clarify for owners and operators, EPA presented scenarios of typical airport hydrant systems in a guidance document provided during the public comment period.

After publishing the 2011 proposed UST regulation, EPA met with stakeholders to gather more information on airport hydrant system design and operation.[50,51] EPA also provided another iteration of the schematics that contained better defined airport hydrant system scenarios. However, some commenters still were confused about which specific components of an airport hydrant system would be regulated.[52]

Many commenters requested that EPA provide guidance on how to perform the calculations to determine whether the airport hydrant system meets the definition of an underground storage tank and requested clarification of system components. In response to these comments, EPA is providing guidance below.

In order for an airport hydrant system to be subject to the final UST regulation, it must first meet the definition of an underground storage tank. Airport hydrant systems are not regulated UST systems under 40 CFR part 280, unless 10 percent or more of the total capacity of the system is beneath the surface of the ground. When performing the calculation, include all tanks and underground piping that are part of the airport hydrant system. An airport hydrant system may have one or more of the following connected together: aboveground tanks,

[50] January 28, 2012, March 29, 2012, and October 19, 2012 meetings with representatives from Airlines for America
[51] February 28, 2013 and March 18, 2013 meetings with DoD's Defense Logistics Agency Energy
[52] *Airport Hydrant Systems Scenarios Revised*, dated February 28, 2012

underground tanks, field-constructed tanks, or factory constructed tanks. Below are two examples. Note that aboveground piping is not included when calculating the total volume.

Example 1: a 1 million gallon aboveground storage tank (AST) connected to underground piping with a capacity of 100,000 gallons does not meet the definition of an UST, as explained below:

1 million gallons (AST) + 100,000 gallons (underground pipe) = 1.1 million gallons total volume

1.1 million gallons x 10% = 110,000 gallons

The volume of the underground piping (100,000 gallons) is less than 10 percent of the total volume of the tanks and underground piping (110,000 gallons).

Example 2: a 2 million gallon AST feeds two 100,000 gallon field-constructed underground storage tanks and two 50,000 gallon underground tanks constructed in the factory which feed 100,000 gallons of underground hydrant piping. Calculating these values yields a total system capacity of 2,400,000 gallons with 400,000 gallons underground. More than 16% of this airport hydrant system is underground making it an UST.

In response to comments on the proposed definition, EPA is clarifying the definition of an airport hydrant system in this final UST regulation. EPA determined that multiple tanks grouped or interconnected together can function as one system to fuel an airport hydrant system. EPA agrees with commenters that it would not be feasible to separate these tanks to define an airport hydrant system. EPA also found that other tanks not directly connected to the underground airport hydrant piping also could feed the airport hydrant system. The Agency is concluding that an airport hydrant system may consist of interconnected aboveground and underground storage tanks (that could be constructed in the factory or field-constructed) and

piping that function as integral and interchangeable components of the fueling system. Field-constructed tanks that are part of the airport hydrant system are treated as part of the airport hydrant system and not independent UST systems that are field-constructed. The airport hydrant system begins when regulated substance enters from an external source such as a pipeline, barge, rail car, or other motor vehicle carrier, but does not include the external source. Airport hydrant systems use large diameter piping and operate at pressures higher than those of a conventional UST. This final definition alleviates stakeholder uncertainty on which components of an airport hydrant system must meet the UST regulation by including all integral components that form an airport hydrant system and deliver fuel to the aircraft. These systems include underground piping and ASTs or USTs that hold aircraft fuel (for example, settling tanks or product recovery tanks). They do not include tanks or underground piping not storing aircraft fuel (for example, additive tanks) or tanks and underground piping not connected to the airport hydrant system (for example, a system that fuels an emergency power generator for a pump house). In addition, EPA is aware there may be instances where an airport hydrant system might include permanently installed dispensing equipment at the end of the hydrant piping instead of a fill stand. However, since these systems still operate under high pressure and contain large diameter piping, we consider them to be airport hydrant systems.

Definition of a Field-Constructed Tank

The preamble to the 1988 UST regulation described a field-constructed tank as a tank usually constructed of steel or concrete and shaped like flat vertical cylinders, with a capacity of greater than 50,000 gallons. Tanks that are primarily factory built, but assembled in the field, are

considered factory built tanks. For example, welding two halves of a factory constructed tank together in the field does not qualify the tank as a field-constructed tank. Several commenters requested EPA define field-constructed tank in the final UST regulation in order for implementing agencies and owners and operators to know which tanks are applicable. While EPA thinks this term is self-evident, this final UST regulation defines field-constructed tank as a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed. Please note this definition excludes those tanks with components primarily manufactured in a factory with minimal assembly in the field. EPA considers those tanks are factory built tanks. Field-constructed tanks vary from sizes smaller than 50,000 gallons to sizes very large in capacity. Large capacity tanks may exceed size or shape limitations that prohibit transportation of the tank in whole to the UST site. Field-constructed tanks present an engineering, design, or transportation concern that cannot be addressed by fabrication in a factory or are more ideally addressed through in-field construction. This definition includes tanks that are mounded or partially buried, such as those defined in 40 CFR part 112, if 10 percent or more of the volume of the system is beneath the ground's surface or otherwise covered with earthen material. EPA considers a field-constructed tank that is part of a wastewater treatment system to be partially excluded from the final UST regulation according to § 280.10(c). See section C-3 for additional information on the partial exclusion for wastewater treatment tank systems.

Universe of Field-Constructed Tanks and Airport Hydrant Systems Affected

UST systems with field-constructed tanks are generally very large and, in the event of a release, pose a substantial threat to human health and the environment. Typical tank sizes range from 20,000 gallons to greater than 2 million gallons. EPA is aware of approximately 330 UST systems with field-constructed tanks owned by the Department of Defense and 12 field-constructed tanks owned by the Department of Energy (DOE).

One commenter objected to EPA regulating airport hydrant systems because the 2011 proposed UST regulation addressed airport hydrant systems at military facilities and did not include systems at commercial airports. When issuing the 2011 proposed UST regulation, EPA thought the universe of these systems was mainly owned by DoD, based on information from DoD and commercial airport representatives. The 2011 proposed UST regulation also assumed the universe included two commercial airports with airport hydrant systems. Airlines for America (A4A, formerly known as Air Transport Association of America, Inc.) provided additional information during the public comment period that suggested nine commercial airports would be affected by the final UST regulation. As a result of the comments received, EPA did extensive research to confirm which commercial airports might be affected by the final UST regulation. EPA met with personnel from DoD and from eight of the nine suggested commercial airport facilities to gather additional information and determine the universe of airport hydrant systems that would have to comply with the final UST regulation.[53,54,55,56] Additionally, EPA listened to concerns and answered questions about the 2011 proposed UST

[53] Discussions With Commercial Airports That May Be Affected By The Final UST Regulation dated February 6, 2013

[54] Note that EPA did not meet with personnel from Indianapolis International Airport however, A4A and vendors stated that the airport hydrant system is equipped with the necessary equipment to meet requirements in the final UST regulation

[55] January 28, 2013 and March 29, 2012 meetings with A4A

[56] February 28, 2013 and March 18, 2013 meetings with DoD's Defense Logistics Agency Energy

regulation. EPA also met with release detection vendors to determine whether commercial airports and DoD facilities could achieve release detection compliance within the specified time frames.[57,58,59] EPA concluded that of the nine airports A4A named, eight would possibly be affected by the final UST regulation. Based on these meetings, EPA found that most of the commercial airport hydrant systems have release prevention and detection equipment currently installed on them and airport personnel are already performing various activities that can be modified to meet the final UST regulation.

Process for Obtaining Public Comment

One commenter suggested that EPA:

- Did not follow all requirements to allow stakeholder input prior to issuing the 2011 proposed UST regulation
- Did not allow stakeholders adequate time to provide comments
- Failed to follow the correct public notice procedures
- Failed to inform stakeholders of two commercial airports that might be affected by the final UST regulation
- May have led commercial airport stakeholders to doubt that any commercial airport hydrant systems would be affected by the final UST regulation

[57] June 20, 2012 and May 19, 2013 meeting with Hansa Consult of North America, LLC
[58] June 20, 2012 meeting with VISTA Precision Solutions
[59] August 15, 2012 meeting with Ken Wilcox and Associates

The commenter also suggested EPA should withdraw the 2011 proposed UST regulation because the administrative record and resulting proposal conflicted with Executive Order 13563 (*Improving Regulation and Regulatory Review*).[60]

EPA disagrees with these comments. We performed extensive stakeholder outreach both prior to developing the 2011 proposed UST regulation and during the public comment period. In addition, EPA followed procedures required by the Administrative Procedure Act for providing public notice and requesting public comment through the *Federal Register*. In order to allow additional time for airport authorities to perform a preliminary assessment and respond to the 2011 proposed UST regulation, EPA extended the public comment period by two months as requested by commenters.[61] EPA met with all interested stakeholders who requested meetings, including representatives of commercial airports. EPA carefully researched information provided during the public comment period; this included verifying methods of release detection currently in use at commercial airports and DoD facilities, as well as what methods would be technically feasible at those facilities. When issuing the 2011 proposed UST regulation, EPA thought Lambert-St. Louis International Airport and Denver International Airport were the only commercial airports that would be affected by the final UST regulation. EPA identified these airports in a meeting with Airlines for America. During that meeting, the Agency also received additional information on other airports possibly affected by the proposal.[62] While EPA did not specifically identify the two commercial airports that would potentially be affected by the final

[60] On January 18, 2011, President Obama issued Executive Order 13563, which directed federal agencies to develop a preliminary plan which outlined the agency's approach for periodically reviewing regulations to determine whether any rules "should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives."

[61] January 5, 2012 request from A4A for a 60-day extension for more time to review and query its membership and potentially affected airports for a more complete understanding of the 2011 proposed UST regulation and potential costs

[62] January 28, 2012 meeting with A4A

UST regulation, the 1988 UST regulation has been in effect for over two decades and portions of it have applied to airport hydrant systems since that time. Owners and operators of these systems have been required to comply with those applicable portions of the UST regulation since 1988, and it has been the responsibility of owners and operators to determine whether their airport hydrant systems are regulated since the effective date of the 1988 UST regulation. Nonetheless, EPA stated in the 2011 proposed UST regulation that airport hydrant systems are "…mainly owned by the Department of Defense (DoD)…," not that DoD is the sole owner of all airport hydrant systems. This statement indicates there are non-DoD owned airport hydrant systems that could be affected by this final UST regulation.

Impacts of Regulating Airport Hydrant Systems and Field-Constructed Tanks

Commenters generally supported removing the deferral for these systems. However, there were some commenters who opposed regulating these systems. A few commenters were concerned about the costs for owners and operators to comply with the release detection requirements of the final UST regulation. EPA acknowledges that some release detection methods may result in additional costs to owners and operators. However, EPA carefully researched current release detection efforts at commercial airports and DoD facilities and used that information to estimate costs. See the RIA, which is available in the docket for this action, for additional information about how we estimated costs.

Other Regulations that Affect Airport Hydrant Systems and Field-Constructed Tanks

To avoid overlapping regulations, several commenters suggested EPA evaluate other requirements that owners and operators of airport hydrant systems and field-constructed tanks perform as part of fuel management programs. One commenter also asserted that this evaluation was necessary to comply with Executive Order No. 13563.[63] After issuing the 2011 proposed UST regulation, EPA performed this evaluation by gathering information on fuel management programs (such as release prevention, repairs, operation and maintenance, inspections, and operator training) owners and operators at these facilities must perform in order to meet other federal, state, and industry regulations.[64] For example, EPA found that requirements administered by the Federal Aviation Authority (FAA), such as 14 CFR part 139 (*Certification of Airports*), and directives, such as ATA 103 and United Facilities Criteria (UFC) 3-460-03, require owners and operators of airport hydrant systems inspect airport hydrant systems and connected components. EPA also found that 14 CFR part 139 (*Certification of Airports*) emphasizes overall airport safety practices.

One commenter asked whether EPA evaluated the SPCC requirements for regulating underground portions of airport hydrant systems. Another commenter suggested that EPA evaluate the effectiveness of existing state requirements for field-constructed tanks.[65] EPA is aware that commercial airports and DoD facilities comply with SPCC requirements for their airport hydrant systems and field-constructed tanks. However, UST and SPCC regulations are complementary. The SPCC regulation focuses on oil discharges that could impact navigable waters, while the UST regulation focuses mainly on day-to-day maintenance and operation to

[63] Executive Order 13563 requires federal agencies to avoid implementing unnecessary redundant requirements and promulgate regulations that are less burdensome to the regulated community

[64] EPA performed an assessment of the following additional requirements that owners and operators follow: 40 CFR part 112 (SPCC); 14 CFR part 139 (FAA); A4A 123; ATA 103; ATA O&M Guidance; UFC 3-460-1 [*Proposed UST Requirements Compared To Existing Facility Requirements And Recommended Practices*]

[65] New York allows owners and operators to perform a modified American Petroleum Institute Standard 653 inspection combined with monitoring well release detection for large field-constructed tanks

prevent releases to soil and groundwater. For example, the SPCC regulation requires a tank inspection, such as an American Petroleum Institute (API) Standard 653 inspection, which ensures aboveground storage tanks and piping are structurally sound. In addition, regulatory overlap is mitigated by the SPCC regulation, which allows UST release detection as a method to meet its tank inspection requirement. The SPCC regulation requires owners and operators conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement, but does not specify a method, frequency, or leak rate. The UST regulation is more specific and requires periodic release detection testing of underground piping.

EPA thinks that other regulatory programs (such as SPCC and FAA) lack the necessary specificity or do not meet equivalency criteria we deem are necessary for these UST systems. Additionally, even though some A4A documents provide many recommended practices that owners and operators of airport hydrant systems and field-constructed tanks may follow for their fuel management programs, these practices are not regulatory requirements, and airports have the option of following them. Moreover, EPA developed a final UST regulation that is cost effective to the extent practical and is the least burdensome to owners and operators, yet still protects human health and the environment. This final UST regulation does not impose redundant requirements. Rather, it contains complementary requirements that will protect human health and the environment.

Effect on Airport Operations

One commenter suggested the requirements in the 2011 proposed UST regulation were not legally or technically viable for commercial airports. That commenter said EPA should develop a separate regulation specific to commercial airport hydrant systems. In addition, a few commenters were concerned that removing the deferral for airport hydrant systems would cause service disruptions due to installing release prevention and detection equipment. Those commenters also said performing release prevention and detection would cause massive service delays, affect military missions, and threaten national security and the National Airspace System.

Based on discussions with DoD prior to issuing the 2011 proposed UST regulation and talking to DoD and potentially affected airports after issuing it, EPA concluded that most facilities already have the necessary equipment to meet many of the requirements in the final UST regulation. EPA also concluded from those conversations that release detection is normally performed during service downtimes or when operations are minimal. Some airport hydrant systems have the capability of transferring product flow to other sections of the airport hydrant system to avoid system downtime. DoD stated that leak testing is performed according to prescribed requirements in Florida and California and at least biennially in other states when funding allows. Where feasible, piping is normally tested in segments to meet testing leak rates; piping segments can be isolated to find leaks more efficiently. EPA learned that some airport hydrant systems are capable of bypassing areas when airport hydrant piping is being tested; this avoids total system shutdown and allows continued airport operation. In addition, many airport personnel perform daily operations and maintenance activities, such as hydrant pit inspections and leak monitoring, on airport hydrant system components to avoid product loss, ensure fuel quality, and ensure personnel safety.

This final UST regulation incorporates many of those tasks that operators normally perform regularly to prevent and detect leaks from these systems. However, to meet the final UST regulation, owners and operators may need to make minor modifications to their current activities. Since many airports have mechanisms in place and are already performing release monitoring, meeting requirements in the final UST regulation will not severely affect airport operations or cause service delays severe enough to significantly affect the military mission or disrupt the National Airspace System. EPA concluded that the information we gathered since issuing the 2011 proposed UST regulation supports regulating these systems as required in the final UST regulation. In addition, this final UST regulation includes changes to ensure compliance requirements are less disruptive and further mitigate concerns regarding service disruptions, such as adding options owners and operators may use to meet the release detection requirement.

Implementation Time Frame

EPA is aware that this final UST regulation adds new requirements for owners and operators, as well as implementing agencies which have not fully regulated airport hydrant systems and field-constructed tanks in the past. A few commenters voiced concerns that the proposed implementation time frames would not give owners and operators, or implementing agencies, adequate time to assess these systems and determine the proper course of action. EPA thinks providing a single effective date is important because it reduces the burden on implementing agencies, owners, and operators to track various compliance deadlines. EPA is also allowing owners and operators who use periodic tightness testing for certain piping to phase

in release detection requirements up to seven years. Additionally, EPA thinks three years gives owners and operators sufficient time for planning and installing necessary equipment to meet the requirements in this final UST regulation.

Other Comments

Commenters generally supported changing the applicability date for previously closed systems of airport hydrant systems and field-constructed tanks, giving implementing agencies the flexibility to require a site assessment and proper closure of systems closed between the effective date of the 1988 UST regulation and this final UST regulation. EPA agrees with commenters. As a result, this final UST regulation requires owners and operators of field-constructed tanks and airport hydrant systems, which were permanently closed before the effective date of this final UST regulation, to conduct a site assessment and close the UST system according to the closure requirements if directed to do so by the implementing agency.

In the 2011 proposed UST regulation, EPA asked commenters if we should consider alternative options for closing very large UST systems in place. Most commenters recommended that large field-constructed tanks either be removed or filled with an inert solid material to prevent releases of residual contamination to the environment. Others suggested EPA allow some flexibility when closing these UST systems in place. EPA agrees with commenters that implementing agencies may need to have more flexibility in addressing these systems at closure. EPA is modifying the closure requirement in § 280.71(b) of the final UST regulation to allow closure in place in a manner approved by the implementing agency. This addition

provides implementing agencies the option to determine that owners and operators may close the UST system in place without filling it with an inert solid material.

One commenter recommended that EPA, in the final UST regulation, directly reference the military construction standard associated with field-constructed tank design and construction discussed in the preamble to the 2011 proposed UST regulation. EPA agrees with the commenter and is adding the military construction criteria *UFC 3-460-01 – Petroleum Fuel Facilities* to this final UST regulation.[66] Although design standards are now available for aboveground field-constructed tanks, EPA is not aware of standards written according to a national code of practice developed by a nationally recognized or independent testing laboratory for non-military field-constructed tanks and airport hydrant systems. If demand arises and a commercial standard is not developed to address the need, owners and operators may use the UFC, where applicable.

Release Detection

Background

In the preamble to the 1988 UST regulation, EPA discussed the large volumes of product throughput, large capacities, and long lengths of large diameter piping for airport hydrant systems. At the time, EPA believed release detection was not feasible for airport hydrant systems. These systems were monitored for releases periodically, but no single leak test existed

[66] UFC 3-460-01 –*Petroleum Fuel Facilities* is a military construction criteria that includes basic requirements for the design of fueling systems; the design of receiving, dispensing, and storage facilities; ballast treatment and sludge removal; corrosion and fire protection; and environmental requirements

as an industry standard. Inventory control was often used, but its sensitivity was limited due to the large product volumes airport hydrant systems typically handle. To allow more time for gathering information, EPA in the 1988 UST regulation deferred regulating airport hydrant systems from release detection requirements in subpart D. EPA also deferred UST systems with field-constructed tanks from most requirements in the 1988 UST regulation, due to a lack of appropriate release detection methods. At that time, EPA believed the majority of release detection methods applied to factory built tank systems and did not adequately work for UST systems with field-constructed tanks or airport hydrant systems.

Challenges of Conventional Release Detection Methods

Standard release detection methods can successfully test and detect releases on pressurized piping at commercial service stations, but that is not the case for airport hydrant systems and large diameter piping associated with field-constructed tanks. For a variety of reasons, the piping of most airport hydrant systems and field-constructed tanks cannot meet release detection requirements in the 1988 UST regulation. High product throughput makes it difficult and expensive to achieve the same leak rate thresholds established for traditional UST systems within a reasonable time frame. Product temperature fluctuations present challenges for release detection testing of conventional underground piping. However, release detection for piping of airport hydrant systems and large diameter piping associated with field-constructed tanks poses greater challenges. As temperatures fluctuate, product expands or contracts, increasing or decreasing product volume and pressure. The magnitude of piping associated with these systems creates an even greater temperature fluctuation; there are varying temperature

gradients throughout the length of piping. Fluctuating line pressure during a release detection test can mask an existing release or falsely indicate one occurred. In addition, the out of service period needed to test airport hydrant piping could range from one to several days after the last product transfer.

Removing airport hydrant systems from service for extended periods will greatly impede their purpose of rapid and timely delivery of fuel to aircraft. When using pressure based testing methods to produce accurate leak test results, airport hydrant system piping needs to be isolated in appropriately sized segments. Some airport hydrant systems have numerous isolation points with connections for release detection equipment. Others have longer underground piping segments with isolation valves for testing located up to 0.5 miles apart. The greater the volume of a segment, the more time it takes to obtain a valid result at a given leak rate. Although technology is available, it may be cost prohibitive and require significant facility down time for owners and operators to monitor airport hydrant systems for releases at the rates and frequencies required in the 1988 UST regulation.

EPA also recognizes that most release detection methods for factory built tanks are capable of monitoring UST systems with field-constructed tanks up to 50,000 gallons. After evaluating current methods, EPA realized existing release detection options for tanks in subpart D of the 1988 UST regulation are generally not applicable to UST systems greater than 50,000 gallons because most methods are limited by tank capacity. EPA acknowledges the complexities in performing release detection on tanks significantly larger than 50,000 gallons. It is critical to allow sufficient time for a tank to reach a state of equilibrium prior to performing a test. As tank size increases, the time for a tank to reach an equilibrium increases significantly. Based on

discussions with release detection vendors, many larger tanks require multiple inactive days to yield an accurate test result.

DoD owns most UST systems with field-constructed tanks. Taking these tanks out of service for multiple days to meet the 1988 release detection requirement would, in some cases, impede DoD's mission, be impractical to sustain, and result in significant costs.

Release Detection Is Now Available

While release detection used for conventional USTs may not work well for airport hydrant systems and field-constructed tanks greater than 50,000 gallons, release detection methods specifically designed for these UST systems are now available. Over the last 25 years, the petroleum services industry has developed release detection technologies for airport hydrant systems and field-constructed tanks. The NWGLDE lists *Large Diameter Line Leak Detection Method (6 Inches Diameter Or Above)* and *Bulk Underground Storage Tank Leak Detection Method (50,000 Gallons Or Greater)*, both of which identify methods capable of detecting releases from airport hydrant systems and field-constructed tanks.[67] EPA contacted several vendors to determine the strengths and limitations of release detection methods for these UST systems. EPA also talked with DoD's Defense Logistics Agency (DLA) Energy[68] about challenges in addressing release detection requirements in states, such as California, which do not defer airport hydrant systems from release detection. Because they perform release detection on airport hydrant systems in other states, DLA Energy has significant information about airport

[67] National Work Group On Leak Detection Evaluation's List Of Leak Detection Evaluations For Storage Tank Systems. http://www.nwglde.org/

[68] Defense Logistics Agency Energy was formerly known as Defense Energy Support Center

hydrant system release detection. As of this final UST regulation, some state UST programs require release detection for UST systems with field-constructed tanks and airport hydrant systems.[69]

Feasibility of Proposed Release Detection Options for Piping

In order to allow owners and operators flexibility to meet the release detection requirement, EPA proposed these four alternatives for underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons:

- Pressure based line testing methods
- Continuous interstitial monitoring
- Automatic line leak detector combined with interstitial monitoring and
- Other methods approved by implementing agencies

EPA requested comment or additional data on the proposed release detection requirements to determine their feasibility. Several commenters said the options in the 2011 proposed UST regulation were insufficient and requested EPA provide options that offered owners and operators more choices. A4A provided EPA with the names of nine commercial airports that could be affected by the final UST regulation and the feasibility of applying the release detection methods discussed in the 2011 proposed UST regulation to these airports. This

[69] Tasks 2-4, Work Assignment 1-25: *Preliminary Assessment and Scoping of Data Related to Potential Revisions to the UST Regulations*; Industrial Economics (IEc) Inc. identified 17 state UST programs that regulate airport hydrant systems. EPA's Office of Underground Storage Tanks gathered additional information from seven of nine select state UST programs to identify the extent of the state's release detection requirements and compare those requirements to the release detection requirements in EPA's proposed 2011 UST regulation

information helped EPA further refine this final airport hydrant system requirements, including release detection.

A4A stated that the only feasible choice EPA provided was pressure based methods and substantial retrofits would be required to meet the requirements at Chicago O'Hare International Airport (ORD), John F. Kennedy International Airport (JFK), and possibly other airports. However, EPA through our analysis and in depth discussions with those airports, thinks the airport hydrant system at JFK, as currently configured, may not meet the definition of an UST in this final UST regulation; this means the requirements would not apply. In addition, if planned capital upgrades are completed on one of ORD's airport hydrant systems, that system may not meet the definition of an UST and would not be subject to this final UST regulation. If configurations for either of these airport hydrant systems change in the future, the owner and operator must re-evaluate the system to determine if it meets the definition of UST in this final UST regulation. Owners and operators are responsible for determining whether their airport hydrant systems meet the definition of an UST and, if necessary, comply with this final UST regulation.

As a result of comments and while developing the final UST regulation, EPA met with DoD, A4A, personnel representing potentially impacted commercial airports, and release detection vendors to develop release detection methods for the final UST regulation and determine how or if commercial airports and DoD facilities could achieve compliance within the specified time frames.[70,71,72,73,74] From those discussions, EPA found that most, if not all, of the

[70] January 28, 2012 and March 29, 2012 meetings with representatives from Airlines for America
[71] February 28, 2013 and March 18, 2013 meetings with DoD's Defense Logistics Agency Energy
[72] June 20, 2012 and May 19, 2013 meeting with Hansa Consult of North America, LLC
[73] June 20, 2012 meeting with VISTA Precision Solutions
[74] August 15, 2012 meeting with Ken Wilcox and Associates

potentially affected commercial airports have or will have mechanisms in place to achieve compliance with the release detection requirements in this final UST regulation. In addition, owners and operators already implement release detection according to technical requirements in states where airport hydrant systems are not deferred. EPA found that many of these airport hydrant systems perform a type of inventory management and hydrostatic testing of the piping system to detect pressure changes in the UST system. EPA determined that although the 1988 UST regulation did not require airport hydrant system owners and operators perform these tests, both DoD facilities and commercial airports have already been performing various fuel management methods to monitor and track fuel inventories.

Release Detection Options for Piping in the Final UST Regulation

Based on comments, EPA is providing flexibility for owners and operators of piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons to meet the release detection requirements. This final UST regulation modifies the piping release detection options in the 2011 proposed UST regulation and incorporates some of the methods currently used at commercial airports and DoD facilities. Owners and operators of these systems may use existing piping release detection options provided in subpart D (except for passive groundwater and vapor monitoring, which must be combined with inventory control as described below), or they may use alternative piping release detection methods in § 280.252(d)(2). EPA thinks these options are reasonable and represent an appropriate balance of practicality and protectiveness. Piping associated with field-constructed tanks 50,000 gallons or less in capacity must use the release detection options listed in subpart D.

Pressure Based Testing

The final UST regulation allows owners and operators to perform pressure based testing methods according to performance criteria dependent on volume of the line segment tested. These criteria provide specific performance thresholds for both semiannual and annual testing. Owners and operators may perform semiannual or annual line testing at or above operating pressure with a probability of detection of 0.95 and a probability of false alarm of 0.05. This method allows owners and operators to meet a variable leak rate based on piping test section volume. The leak rate ranges from 1 to 3 gallons per hour, depending on piping volume for semiannual testing and from 0.5 to 1.5 gallons per hour for annual testing. The final UST regulation establishes 3 gallons per hour as the maximum threshold because the majority of available testing methods are capable of meeting this leak rate.

For the first six years (or two test periods), piping segments that cannot meet a 3 gallons per hour threshold are allowed to meet a higher threshold of up to 6 gallons per hour. Available methods are capable of testing segments to a leak rate of 6 gallons per hour. The higher threshold provides for use of existing test methods during the first six year period. Six years will provide owners and operators time to upgrade their piping systems to meet the up to 3 gallons per hour threshold for semiannual testing. Between years six and seven, owners and operators must conduct one additional tightness test that, at a minimum, meets the semiannual testing threshold. In the seventh year, owners and operators must begin meeting the semiannual or annual line tightness testing requirements according to the requirements in §280.252(d)(2)(i).

EPA is providing a three year phase-in period for the remaining release detection options, because these methods will not require significant construction or upgrades for implementation.

EPA asked commenters whether other release detection options should be considered for underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons. Based on comments, EPA is adding inventory control, groundwater and vapor monitoring, and other methods for piping as release detection options in this final UST regulation.

Inventory Control

EPA reviewed performance standards for daily inventory control procedures used by DoD and the commercial airports identified by A4A.[75,76] Based on performance standards for daily inventory control procedures performed by both DoD and A4A, EPA is allowing inventory control as part of a combination method of release detection. EPA chose 0.5 percent of flow through as the performance standard for inventory control because this value represents the maximum tolerance allowed under the performance standard for products typically stored or handled by airport hydrant systems. Owners and operators may conduct inventory control according to DoD Directive 4140.25, ATA's Airport Fuel Facility Operations and Maintenance

[75] DoD's Bulk Petroleum Management Policy - DoD 4140.25-M, Volume II – *Petroleum Management*, Chapter 10 – Accountability (June 22, 1994) is accessible on line at: http://www.dtic.mil/whs/directives/corres/pdf/414025-m-vol2-chapter10.pdf. This standard recognizes that petroleum products are subject to losses and gains. The tolerance factor that represents the amount of fuel which might be lost or gained under normal conditions varies by product and status of fuel (i.e., storage or in transit). These values in the policy represent standard tolerances (i.e., system flow-through) for various products in transit and storage: (1) Aviation and motor gas = 0.5 percent and 0.5 percent; (2) JP4 = 0.5 percent and 0.3 percent; (3) Jet Fuel, Distillates, Residuals = 0.5 percent and 0.25 percent; and (4) JP5, JP8, DF2, F76, etc. = varies by individual agreements with airports and 0.5 percent

[76] EPA reviewed Airlines For America Guidance - *ATA Airport Fuel Facility Operation and Maintenance Guidance Manual*, Revision 2004.1; and ATA Spec 123: *Procedures for the Accounting of Jet Fuel Inventory 2011.2*. The two documents provide guidance for operators to investigate, report, or explain any variances exceeding ± 0.1 percent

Guidance Manual, or equivalent procedures. EPA is allowing this method in combination with either a pressure based line tightness test using the leak rates from the semiannual test in § 280.252(d)(2)(i) at least once every two years, or passive groundwater or vapor monitoring once every 30 days as described below.

Groundwater and Vapor Monitoring

EPA proposed to phase out groundwater and vapor monitoring as release detection methods in the 2011 proposed UST regulation. However, this final UST regulation retains these methods with modifications. See section D-6 for more information. These methods are also allowed with some modifications in subpart K. EPA divided vapor monitoring into two categories: active monitoring for chemical markers or tracers and passive monitoring for stored product in the tank system. Owners and operators of these systems may use active vapor monitoring methods characterized by testing or monitoring of chemical markers or a tracer compound placed in the tank system, according to § 280.43(e) to detect a release of at least 0.1 gallon per hour with probabilities of detection and false alarm of 0.95 and 0.05, respectively. Owners and operators choosing this option must conduct this test at least once every two years. This method may be used as a stand-alone method of release detection.

Owners and operators may also combine passive vapor or groundwater monitoring with inventory control, described above, that can detect a release of at least 0.5 percent of flow through at least every 30 days. Passive vapor monitoring or groundwater monitoring must be conducted at least every 30 days according to § 280.43(e) or (f), respectively.

Other Methods for Piping

The final UST regulation maintains the option for owners and operators to use alternative methods of release detection for piping approved by the implementing agency, as discussed in the 2011 proposed UST regulation. This provides flexibility for owners and operators to comply by using methods or a combination of methods equivalent to the requirements in § 280.252(d)(2). EPA recognized that other methods not included in § 280.252(d)(2) could be acceptable, as long as they are as effective and are approved by implementing agencies. The performance criteria for piping release detection methods in § 280.252(d)(2) provide owners and operators with information about how to demonstrate the effectiveness of release detection methods that must be approved by the implementing agency.

Proposed Release Detection Options for Piping Not Included in the Final UST Regulation

Because piping segments associated with airport hydrant systems and field-constructed tanks can contain large volumes of regulated substances, EPA asked commenters if it was feasible to require ALLDs to detect a leak at 3 gallons per hour at 10 pounds per square inch line pressure within one hour or equivalent. EPA anticipated receiving information on the appropriate leak rate for ALLDs on this piping. EPA did not receive any indication that current performance standards of ALLDs could be modified for these systems. Although some portions of existing systems may be able to use this option, EPA agrees it is not feasible to use an ALLD with interstitial monitoring on piping associated with airport hydrant systems and field-constructed tanks.

This final UST regulation modifies the 2011 proposed UST regulation; owners and operators of airport hydrant systems or piping associated with field-constructed tanks greater than 50,000 gallons are not provided specific requirements in This final UST regulation for using continuous interstitial monitoring and the combination of automatic line leak detectors with interstitial monitoring for piping. Many of these systems lack secondary containment and automatic line leak detectors cannot adapt to the operating pressures of these systems.

In the 2011 proposed UST regulation, EPA asked if testing the piping for airport hydrant systems and field-constructed tanks at operating pressure was sufficient. The 1988 UST regulation requires owners and operators test conventional systems at one and a half times operating pressure. EPA is aware that airport hydrant system piping operates at high pressures and agrees with commenters who stated that testing above operating pressure might be infeasible. This final UST regulation requires owners and operators to test these systems at least at operating pressure, because these large piping systems operate at pressures much higher than conventional gasoline stations. However, EPA is allowing testing at or above operating pressure, but is not providing a set value. Professional testers can decide the appropriate pressure to test these systems, as long as the pressure is at least the operating pressure of the system.

Release Detection Requirements for Tanks Associated with Airport Hydrant Systems and Field-Constructed Tanks

This final UST regulation establishes release detection requirements for tanks associated with airport hydrant systems and field-constructed tanks. Airport hydrant systems may consist of a series of large capacity shop fabricated tanks, although some airport hydrant systems use field-

constructed tanks. Shop fabricated tanks and field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the requirements in subpart D. Field-constructed tanks with capacity greater than 50,000 gallons must either be monitored using release detection methods in subpart D (except for passive groundwater and vapor monitoring which must be combined with inventory control as described below) or use one of the alternative methods for tanks listed at § 280.252(d)(1).

Feasibility of Proposed Release Detection Options for Field-Constructed Tanks

To allow owners and operators more flexibility in meeting the release detection requirement, EPA proposed these four alternatives for UST systems with field-constructed tanks greater than 50,000 gallons:

- Annual tank tightness test
- Automatic tank gauging system that can detect a 1 gph leak combined with a tank tightness test every three years
- Automatic tank gauging system that can detect a 2 gph leak combined with a tank tightness test every two years and
- Other methods approved by the implementing agency

EPA requested comment or additional data on the proposed release detection options to determine their feasibility. Most commenters thought the release detection options were appropriate and sufficient. One commenter thought EPA should include chemical marker or tracer testing. Another commenter thought EPA should expand the types of release detection

methods specified in the final UST regulation to include use of sensors, probes, monthly visual inspections, or other methods approved by the implementing agency.

EPA met with and obtained information from DoD and release detection vendors throughout the regulatory process. EPA researched suggested release detection options and standard practices conducted by DoD following the public comment period for the 2011 proposed UST regulation. EPA found that these facilities perform inventory management on their UST systems. EPA determined that although not performed as specified in the 1988 UST regulation, some DoD facilities are performing fuel management methods to monitor and track fuel inventories for their field-constructed tanks.[77,78]

Release Detection Options for Field-Constructed Tanks in the Final UST Regulation

Based on comments and additional information from DoD as well as commercial airports about their operations, EPA is including in this final UST regulation all release detection options discussed in the 2011 proposed UST regulation. EPA is also adding three other options to this final UST regulation. Owners and operators of field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in subpart D. Owners and operators of field-constructed tanks greater than 50,000 gallons must use the alternative release detection methods described in subpart K or the release detection options in subpart D (except that groundwater and vapor monitoring must be used in combination with inventory control as

[77] Final Report - *Validation of the Low-Range Differential Pressure (LRDP) Leak Detection System for Small Leaks in Bulk Fuel Tanks Environmental Security Technology Certification Program*, U.S. Department of Defense
[78] DoD 4140.25-M: *Management of Bulk Petroleum Products, Storage, and Distribution Facilities*, Volume V http://www.dtic.mil/whs/directives/corres/html/414025m_vol1_3.html

described below). EPA thinks these options are reasonable and will quickly detect releases when they occur.

Tank Tightness Testing

In the 2011 proposed UST regulation, EPA discussed the option of owners and operators performing annual tank tightness testing that can detect a 0.5 gallon per hour leak rate. EPA proposed this performance standard based on information about leaks from several field-constructed tanks. The information indicated leak rates from the tanks ranged from 0.31 gph to 10 gph, with a median leak rate of 0.58 gph. EPA determined that most available methods were capable of meeting the proposed leak rate of 0.5 gph. EPA did not receive comments regarding the performance standard during the public comment period. The final UST regulation retains the option for owners and operators to perform annual underground tank tightness testing that can detect a 0.5 gallon per hour leak rate.

Automatic Tank Gauging Combinations with Tank Tightness Testing

This final UST regulation allows owners and operators to combine an automatic tank gauging system with a tank tightness test that achieves different leak rates during different periods of performance. One combination uses an automatic tank gauging system performing release detection at least every 30 days that can detect a leak rate less than or equal to 1 gallon per hour with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three years. Another combination couples an automatic tank gauging system

performing release detection at least every 30 days that can detect a leak rate less than or equal to 2 gallons per hour with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two years. This automatic tank gauging requirement is different from the release detection requirement in the 1988 UST regulation for factory built tanks. These leak rates and time frames for release detection testing are appropriate because they will detect releases within a reasonable time frame, given the large tank sizes and time needed to perform testing on these tanks.

Inventory Control

This final UST regulation allows inventory control combined with one of these methods: passive groundwater monitoring every 30 days, passive vapor monitoring every 30 days, or a 0.5 gallon per hour tank tightness test performed at least once every two years. The inventory control option must meet the same requirements as inventory control for piping associated with airport hydrant systems and field-constructed tanks described in the *Release Detection Options for Piping in the Final UST Regulation* section above.

Groundwater and Vapor Monitoring

This final UST regulation allows active vapor monitoring for tanks using the same requirements as described in the *Release Detection Options for Piping in the Final UST Regulation* section above. In addition, owners and operators may also use a combination method incorporating inventory control and passive vapor monitoring or groundwater monitoring using

the requirements described in the *Release Detection Options for Piping in the Final UST Regulation* section above.

Other Methods for Field-Constructed Tanks

Implementing agencies may approve another method if the owner and operator demonstrate the method can detect a release as effectively as any of the other five methods described in the *Release Detection Options for Field-Constructed Tanks* section. In comparing methods, an implementing agency shall consider the size of release the method can detect and frequency and reliability of detection. Other methods are described in *Other Methods for Piping*.

Release Detection Recordkeeping

This final UST regulation requires owners and operators maintain records of release detection for field-constructed tanks and airport hydrant systems in accordance with § 280.45. The results of any sampling, testing, or monitoring must be maintained for at least one year except as follows: tank tightness testing; line tightness testing; and vapor monitoring using a tracer compound placed in the tank system must retain records until the next test is conducted. EPA is requiring owners and operators maintain these records until the next test is conducted because owners and operators can choose different time frames to conduct release detection testing. This additional flexibility results in some testing occurring at frequencies ranging from less than one year to up to three years.

Release Prevention

As with all other regulated UST systems, this final UST regulation requires airport hydrant systems and field-constructed tanks meet corrosion protection, spill, and overfill requirements, as well as walkthrough inspections.

Corrosion Protection

This final UST regulation requires all airport hydrant systems and field-constructed tanks that routinely contain regulated substances and are in contact with the ground to meet corrosion protection requirements in § 280.252(b)(1). Metal tanks and piping which are encased or surrounded by concrete have no metal in contact with the ground and are not subject to the corrosion protection requirements. Because interim prohibition for deferred UST systems in the 1988 UST regulation has been in effect since May 1985, many of these systems are already equipped with corrosion protection (that is, constructed of: non-corrodible material, coated and cathodically protected steel, fiberglass reinforced plastic, or steel tank clad with fiberglass reinforced plastic). In this final UST regulation, EPA renames § 280.11 *to Installation requirements for partially excluded UST systems*. For corrosion protection, airport hydrant systems and field-constructed tanks must meet the requirements in § 280.252(b)(1). Owners and operators must meet this requirement within three years of the effective date of this final UST regulation.

This final UST regulation does not allow an internal lining as a method for meeting the corrosion protection upgrade requirement. EPA is not allowing an internal lining as corrosion

protection because it does not protect steel in contact with the ground from corroding and causing a release to the environment. Field-constructed tanks and tanks associated with airport hydrant systems, which are not upgraded according to § 280.252(b), and are installed on or before the effective date of this final UST regulation must be permanently closed according to § 280.70.

Spill and Overfill Prevention

EPA concludes that using properly functioning equipment, which is operated according to manufacturer guidelines, is necessary to protect human health and the environment. After discussions with industry, DoD, and commercial airport personnel, EPA understands that existing airport hydrant systems are generally already equipped with spill and overfill prevention equipment to prevent spills and overfills. This final UST regulation requires owners and operators of airport hydrant systems and field-constructed tanks to have spill and overfill prevention equipment and conduct testing or inspections of the equipment. This will ensure the systems and tanks operate properly, contain releases, and decrease the likelihood of a leak into the environment. Owners and operators must install spill and overfill prevention equipment and conduct the first test or inspection within three years of the effective date of this final UST regulation, then at least once every three years thereafter. For more information on spill prevention equipment testing and overfill prevention equipment inspections, see sections B-2 and B-3, respectively.

Walkthrough Inspections

Owners and operators need to properly operate and maintain their UST system equipment in order to prevent and quickly detect releases. Therefore, this final UST regulation adds requirements for owners and operators of airport hydrant systems and field-constructed tanks to perform periodic walkthrough inspections to prevent and quickly detect releases.

EPA found that owners and operators of airport hydrant systems are required to ensure safety and fuel quality, and frequently inspect these systems as part of other requirements and recommendations to ensure system components are operating properly. In addition, EPA understands that airport hydrant systems and some field-constructed tank facilities are already performing operation and maintenance inspections that ensure their systems and associated spill and overfill equipment are operating properly. Thus, EPA found these requirements will impose little, if any, additional burden at these facilities. This final UST regulation requires owners and operators of airport hydrant systems and field-constructed tanks conduct walkthrough inspections according to § 280.36. In addition, EPA is requiring owners and operators inspect hydrant pits and hydrant piping vaults. These areas are unique to airport hydrant systems. It is important to look at hydrant pits and hydrant piping vaults as part of periodic walkthrough inspections to ensure these areas are: free of liquid and debris, not damaged, and free of leaks. Owners and operators must inspect these areas at least once every 30 days if OSHA confined space entry is not required or at least annually if OSHA confined space entry is required. See 29 CFR part 1910 for information about OSHA confined space entry. Some owners and operators already periodically check these areas using the ATA guidance manual, *Airport Fuel Facility Operations and Maintenance Guidance Manual*. Owners and operators must conduct the first inspection within three years of the effective date of the final UST regulation. For more information on walkthrough inspections, see section B-1.

Secondary Containment

This final UST regulation does not require secondary containment for new and replaced piping associated with field-constructed tanks greater than 50,000 gallons in capacity or piping associated with airport hydrant systems. EPA understands this piping typically is larger diameter and runs for long distances, making it difficult to slope the piping to an interstitial monitoring area. In addition, EPA understands it is difficult to keep water out of the interstitial area of long piping runs. Since nearly all this piping is steel, corrosion can occur in the interstitial area when an electrolyte, such as water, is in the interstitial area. This corrosion can significantly shorten the piping's operational life. Corrosion protection on the outside of the piping protects the part of the piping in contact with the ground from corrosion, but does not protect the inside part of piping from corrosion. To prevent corrosion caused by water in the interstitial area, owners and operators would need to add corrosion protection inside the interstitial area of piping, which EPA realizes would be difficult to do. Given these issues, EPA has determined that requiring secondary containment for these piping runs is not practical.

However, EPA is requiring secondary containment for new and replaced piping associated with field-constructed tanks 50,000 gallons or less that do not feed airport hydrant system piping. EPA understands that new, smaller field-constructed tanks, such as those constructed within tanks following permanent closure of an existing UST, typically have piping similar to that installed at commercial gasoline stations. This piping can effectively meet the secondary containment requirements and better protect the environment. For more information, see section A-2, Secondary Containment.

Notification

The 1988 UST regulation did not require owners of airport hydrant systems or field-constructed tanks to comply with the notification requirements of § 280.22, which included certifying proper installation of airport hydrant systems. The 2011 proposed UST regulation required owners and operators of airport hydrant systems and field-constructed tanks installed prior to the effective date of the final UST regulation provide notification of existence to implementing agencies within 30 days of the effective date of this final UST regulation. This final UST regulation modifies the 2011 proposed UST regulation by requiring owners and operators provide a one-time notification of existence to implementing agencies no later than 3 years after the effective date of this final UST regulation. EPA agrees with commenters that airport hydrant system owners and operators need more than 30 days to provide the one-time notification of existence. This change allows owners and operators, as well as implementing agencies, time to identify airport hydrant systems covered by the final UST regulation and gives implementing agencies time to include these systems in their inventories. The final UST regulation does not consider currently installed tanks, including airport hydrant systems, as new UST systems. Therefore, EPA is requiring owners and operators only certify proper installation for airport hydrant systems and field-constructed tanks installed on or after the effective date of the final UST regulation according to § 280.22. In addition, EPA is requiring owners notify within 30 days of ownership change. See section D-3 for more information on notification requirements.

Financial Responsibility

Because EPA is eliminating the deferral for airport hydrant systems and field-constructed tanks, they are no longer be excluded from the financial responsibility requirements in subpart H. Owners and operators who install these UST systems after the effective date of this final UST regulation must comply with the financial responsibility requirements at installation. Owners and operators of airport hydrant systems and field-constructed tanks in use as of the effective date of this final UST regulation must have financial responsibility when they submit the one-time notification of existence for these systems. However, subpart H exempts federal and state entities, which means that federal and state owners and operators of airport hydrant systems and field-constructed tanks do not have to meet the financial responsibility requirement.

Operator Training

EPA is aware that commercial airports are required to follow fuel facility training requirements of 14 CFR part 139; however, those requirements do not cover specifics of the UST requirements. This final UST regulation requires owners and operators of airport hydrant systems and field-constructed tanks meet the operator training requirements of subpart J. Owners and operators of some airport hydrant systems that are considered underground storage tanks may have already complied with state operator training requirements. For example, personnel from General Mitchell Field in Wisconsin report that operators have received Wisconsin class A and B operator training certification. All owners and operators must begin

meeting this requirement not later than three years after the effective date of this final UST regulation. For more information see section A-1, Operator Training.

Partially Excluded Components

EPA regulates UST systems, including tanks and underground piping, in 40 CFR part 280 and aboveground tanks in 40 CFR part 112 (Oil Pollution Prevention). Facilities with greater than 1,320 gallons of aboveground oil storage capacity that could reasonably be expected to discharge oil into navigable waters or adjoining shorelines are subject to the SPCC regulation under the authority of the Clean Water Act.[79] The SPCC regulation includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges into navigable waters and adjoining shorelines. The SPCC regulation also requires regular inspections of aboveground valves, piping, and appurtenances along with integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement. Facilities regulated by the SPCC regulation must also prepare and maintain a written SPCC plan that includes measures to prevent, prepare for, and respond to oil discharges that threaten navigable waters or adjoining shorelines.

Aboveground storage tanks associated with airport hydrant systems and field-constructed tanks covered in this final UST regulation do not have to meet many of the requirements in the UST regulation because they are neither beneath the surface of the ground, nor in contact with the ground. For these reasons, the SPCC regulation is the most effective means of addressing the

[79] http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=b843807afdc641b203ffec44aa671d36&rgn=div5&view=text&node=40:23.0.1.1.7&idno=40

aboveground storage tanks associated with UST systems. Airport hydrant systems that do not meet the definition of UST system because the underground portion is less than 10 percent of the system capacity may be subject to the SPCC regulation for both the aboveground and underground portions of the system. Underground storage tank components such as hydrant pits and piping vaults are considered part of the UST system and subject to the requirements in 40 CFR part 280.

Complementary Regulation of Partially Buried Tanks

Partially buried (also called partially covered) field-constructed tanks may be regulated by both this final UST regulation and the SPCC regulation. The SPCC regulation exempts only completely buried storage tanks subject to all of 40 CFR part 280.[80] Additionally, the SPCC regulation covers tanks situated on top of the ground's surface or partially buried (for example, bunkered, also referred to as mounded tanks) and considers these to be aboveground storage tanks. If 10 percent or more of the total capacity of the tank or tanks and underground piping is underground, the tank system meets the definition of an UST regulated by 40 CFR part 280 or state equivalent program approved under 40 CFR part 281. Therefore, these containers or systems are covered by both SPCC and UST regulations. These regulations are complementary because the SPCC regulation focuses on oil discharges that could impact navigable waters or shorelines, while the UST regulation focuses primarily on day-to-day maintenance and operation to prevent releases that impact soil and groundwater.

[80] 40 CFR 112.2 defines completely buried as any container completely below grade and covered with earth, sand, gravel, asphalt, or other material. Containers in vaults, bunkered tanks, or partially buried tanks are considered aboveground storage containers for purposes of the part

Change from Deferred to Partially Excluded

The 2011 proposed UST regulation used the term deferred for aboveground storage tanks associated with airport hydrant systems and field-constructed tanks considered to be UST systems. The proposal indicated that although these aboveground storage tanks would be subject to some parts of the final UST regulation, EPA intended to continue evaluating whether to fully regulate them in the future. EPA reconsidered these aboveground storage tanks and is making the final determination that the SPCC requirements are the most effective means for addressing oil discharges from aboveground storage tanks. This final UST regulation excludes from subparts B, C, D, E, G, J, and K aboveground storage tanks associated with airport hydrant systems and field-constructed tanks. Aboveground storage tanks that are part of an UST system must continue to meet the requirements of subparts A and F.

3. Wastewater Treatment Tank Systems that Are Not Part of a Wastewater Treatment Facility Regulated Under Sections 402 or 307(b) of the Clean Water Act

In the 2011 proposed UST regulation, EPA removed the existing deferral in § 280.10(c)(1) for wastewater treatment tank systems that are not part of a wastewater treatment facility regulated under sections 402 or 307(b) of the Clean Water Act. Since the 1988 UST regulation, owners and operators of these systems (hereafter referred to as wastewater treatment tanks) were deferred from complying with 40 CFR part 280, subparts B (*UST Systems: Design, Construction, Installation and Notification*); C (*General Operating Requirements*); D (*Release*

Detection); E (*Release Reporting, Investigation, and Confirmation*); G *(Out-of-Service UST Systems and Closure*); and H (*Financial Responsibility*). 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 UST regulation. However, removing the deferral, as discussed in the 2011 proposed UST regulation, would have required owners and operators comply with all subparts of 40 CFR part 280.

Change from Deferred to Partially Excluded

The 1988 UST regulation used the term deferred for wastewater treatment tanks. Although these tanks were subject to some parts of the UST regulation, EPA intended to continue evaluating whether or not to regulate these tanks at a future date. EPA reconsidered these tanks and is making a final determination. EPA is excluding these tanks from most requirements in this final UST regulation; however, the regulatory requirements in subparts A and F for these systems remain the same.

EPA deferred wastewater treatment tanks in the 1988 UST regulation due to uncertainty about the number of tanks that existed and the appropriateness of release detection for these systems. EPA's intent in removing the deferral for these tanks in the 2011 proposed UST regulation was to regulate them further, which would protect human health and the environment from discharges of regulated substances contained in these systems. EPA used the proposal to obtain additional information on these systems, and determine if there were appropriate release prevention and detection technologies available to fully regulate them according to the UST regulation. According to commenter responses, EPA determined that these tanks are often

subject to other environmental regulations; it may not be technically feasible to install release prevention and detection equipment on these systems due to varying designs of these systems; and many of these systems contain mostly water and are not significant sources of contamination.

Installation Requirements for Partially Excluded Tanks

In the 1988 UST regulation, deferred wastewater treatment tanks were required to meet the interim prohibition requirements at § 280.11 (that is, corrosion protected, made of non-corrodible materials, or otherwise designed and constructed to prevent releases during the operating life of the facility due to corrosion or structural failure). Therefore, these tanks are already equipped with corrosion protection if they were installed after the effective date of the 1988 UST regulation. EPA thinks it is appropriate to maintain this requirement, which ensures these tanks are provided with some degree of corrosion protection to prevent releases into the environment. Because EPA is partially excluding these systems, the term interim prohibition no longer applies. Therefore, EPA is rewording the title of § 280.11 to *Installation requirements for partially excluded UST systems*. In addition, EPA is changing § 280.11(a) to reflect that these requirements are installation requirements rather than prohibitions on installation.

Many commenters did not support removing the deferral to regulate these UST systems and were unsure of the universe of wastewater treatment tanks. To address this concern, EPA developed a February 2012 document describing wastewater treatment tanks that would have been regulated under the final UST regulation.[81] Several commenters also voiced concern that

[81] http://www.epa.gov/oust/fedlaws/wwtts_2-29-12_final.pdf

regulating these systems may result in unintended consequences (for example, impracticability of technical requirements and dual regulation) for owners and operators and implementing agencies. To help determine the feasibility of the 2011 proposed UST regulation, EPA asked several stakeholders about operating various types of wastewater treatment tanks.[82,83,84] EPA also gathered information from commenters about implementing other regulations that apply to these systems.[85,86,87,88] After considering commenters' feedback, EPA concluded that the historic level of regulation for these tanks is appropriate and provides adequate controls to ensure environmental protection.

This final UST regulation excludes owners and operators of wastewater treatment tanks from 40 CFR part 280, subparts B (*UST Systems: Design, Construction, Installation and Notification*); C (*General Operating Requirements*); D (*Release Detection*); E (*Release Reporting, Investigation, and Confirmation*); G *(Out-of-Service UST Systems and Closure*); H (*Financial Responsibility*); J (*Operator Training*); and K (*UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems*). EPA is basing this decision on maintaining the installation requirement (§ 280.11), other regulatory controls in place, and the additional information gathered. Owners and operators of wastewater treatment tank systems are still required to comply with subparts A (*Program Scope and Installation Requirements for Partially Excluded UST Systems*); and F (*Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances*).

[82] April 2012 telephone conversation with Tom Groves, New England Interstate Water Pollution Control Commission
[83] April 2012 telephone conversation with Ming Pan, Massachusetts Department of Environmental Protection
[84] April 2012 telephone conversation with Joe Cerutti, Massachusetts Department of Environmental Protection
[85] March 2012 telephone conversation with Kevin Brackney, Nez Perce Tribe
[86] April 2012 telephone conversation with Chris Wiesberg, Missouri Department of Natural Resources
[87] April 2012 telephone conversation with Mary Hansen, Washington State Department of Ecology
[88] May 2012 telephone conversation with Candace Cady, Utah Department of Environmental Quality

4. USTs Containing Radioactive Material and Emergency Generator UST Systems at Nuclear Power Generation Facilities Regulated by the Nuclear Regulatory Commission

In the 2011 proposed UST regulation, EPA maintained the existing deferral in § 280.10(c)(2) and (3) for USTs containing radioactive material and for emergency generator UST systems at nuclear power generation facilities regulated by the United States Nuclear Regulatory Commission (NRC). Since the 1988 UST regulation, owners and operators of these tanks were deferred from complying with 40 CFR part 280, subparts B (*UST Systems: Design, Construction, Installation and Notification*); C (*General Operating Requirements*); D (*Release Detection*); E (*Release Reporting, Investigation, and Confirmation*); G *(Out-of-Service UST Systems and Closure*); and H (*Financial Responsibility*). 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 UST regulation.

After review of DOE Orders and NRC regulations,[89] EPA determined these requirements are comparable to EPA requirements for new and existing USTs regarding spill and overfill control (§ 280.30); operation and maintenance of corrosion protection (§ 280.31); and release detection (40 CFR part 280, subpart D). DOE established standards for facility operations that: protect the public and environment from exposure to radiation from radioactive materials;[90,91,92]

[89] Contract No. GS-10F-0309N, EPA Work Order No. EP-G10S-00001, Work Order No. 1004, Task 2, Subtask c, Quick Turnaround Request No. 6, *Release Response and Corrective Action*

[90] DOE Order 435.1 Chg 1, *Radioactive Waste Management*, ensures management of DOE radioactive waste (i.e. high-level, transuranic, low-level, and the radioactive component of mixed waste) is consistent with Atomic Energy Act of 1954 responsibilities, in a manner that provides radiological protection from DOE operations. (see https://www.directives.doe.gov/directives-documents/400-series/0435.1-BOrder-chg1)

[91] DOE M 435.1-1 Admin Chg 2, *Radioactive Waste Management Manual*, further describes the requirements and establishes specific responsibilities for implementing DOE O 435.1, *Radioactive Waste Management*. It prescribes

protect workers;[93] provide industrial safety;[94] and ensure compliance with applicable federal, state, and local laws, as well as Executive Orders and other DOE directives. DOE uses orders to regulate radioactive materials at their facilities.

NRC regulations at 10 CFR part 50 require that construction permit applications include a design and safety analysis, health and safety risk assessment of facility operations, and determination of the adequacy of controls for accidental releases into the environment for the life of the operating unit. NRC regulations also require facilities meet minimum design, installation, testing, and performance criteria.[95] Appendix B of 10 CFR part 50 requires a quality assurance report that includes testing of facility structures, systems, and components.[96] NRC also developed guidance documents to assist operators with licensing compliance.[97]

EPA was concerned with whether NRC and DOE cleanup standards for radionuclides adequately protect groundwater[98,99,100] and was unfamiliar with how NRC regulates releases of petroleum products or enforces cleanup of releases.

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the following requirements and specific responsibilities for new or modified existing systems*:* secondary containment designed to detect and contain releases, and compatible with material stored (Chapter II P(2)(b)); spill/overfill control (Chapter II(P)(2)(i)); release detection for tanks (Chapter II(Q)(2)(a)(1)), and other storage components (Chapter II(Q)(2)(c)); release detection for failed containment and/or other abnormal conditions (Chapter II(P)(2)(j)); monitoring and/or leak detection for secondary containment (Chapter IIP(2)(j)); corrosion protection (Chapter II(Q)(2)(a)(2),(3)); monitoring and physical inspections (Chapter II(T)) and corrective action (Chapter I(2)(F)(20)). (see https://www.directives.doe.gov/directives-documents/400-series/0435.1-DManual-1-admchg2)

[92] DOE O 458.1 Admin Chg 3, *Radiation Protection of the Public and the Environment* (see https://www.directives.doe.gov/directives-documents/400-series/0458.1-BOrder-AdmChg3)

[93] 10 CFR part 835, *Occupational Radiation Protection* (see http://www.ecfr.gov/cgi-bin/text-idx?SID=dc937acd7069e30635139ca1ee3a44a0&node=pt10.4.835&rgn=div5)

[94] DOE O 440.1B Admin Chg 1, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees* (seehttps://www.directives.doe.gov/directives-documents/400-series/0440.1-BOrder-b-admchg1)

[95] see http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/radwaste.html

[96] Ibid

[97] Ibid

[98] February 1997 letter from EPA to the NRC expressing concerns over the NRC's proposal for increasing dose limits and eliminating the requirement to protect groundwater that could be used as drinking water

The 1988 UST regulation contains prescriptive procedures UST owners and operators must follow in responding to releases into the environment. NRC regulations are performance-based actions; they identify performance measures that are designed to ensure an adequate safety margin and offer incentives for licensees to improve safety without formal regulatory intervention.[101] Accordingly, DOE created orders to supplement EPA regulations for USTs at DOE facilities already subject to the 1988 UST regulation.[102] NRC requires that facilities perform site remediation as part of the decommissioning process, but there are currently no NRC regulations that require remediation at active facilities, unless dose limits are exceeded.[103]

EPA concludes it is appropriate to continue requiring release response and corrective action for these tanks, if the need arises. Due to the sensitive nature of these facilities, implementing agencies have flexibility to establish appropriate response and remediation requirements for owners and operators at these facilities.

Move from Deferred to Partially Excluded

The 1988 UST regulation used the term deferred for USTs containing radioactive material and for emergency generator UST systems at nuclear power generation facilities regulated by the NRC. This indicated that although these tanks were subject to some parts of the

[99] December 1997 letter from EPA to DOE expressing concerns that DOE's draft rule 10 CFR part 834 (Radiation Protection of the Public and the Environment) needs to be consistent with CERCLA and that inconsistencies exist between the draft rule and CERCLA and NCP guidance
[100] October 2002 Memorandum of Understanding between EPA and NRC to identify the interactions for only the decommissioning and decontamination of NRC-licensed sites and ensure dual regulation does not occur regarding the cleanup and reuse of NRC-licensed sites
[101] Contract No. GS-10F-0309N, EPA Work Order No. EP-G10S-00001, Work Order No. 1004, Task 2, Subtask c, Quick Turnaround Request No. 6, *Release Response and Corrective Action*
[102] Ibid
[103] Ibid

UST regulation, EPA intended to continue evaluating the applicability of full regulation of these tanks at a future date. EPA reconsidered these tanks and is making a final determination. EPA is excluding these tanks from most requirements in this final UST regulation; however, the regulatory requirements in subparts A and F for these systems remain the same.

Installation Requirements for Partially Excluded Tanks

In the 1988 UST regulation, deferred USTs containing radioactive material and emergency generator UST systems at nuclear power generation facilities regulated by NRC were required to meet the interim prohibition requirements of § 280.11 (that is, corrosion protected, made of non-corrodible materials, or otherwise designed and constructed to prevent releases during the operating life of the facility due to corrosion or structural failure). While NRC's regulation addresses design and installation standards, interim prohibition requirements have been in effect since the 1988 UST regulation. Accordingly, owners and operators have had to follow this requirement since the effective date of the 1988 UST regulation. EPA has no information suggesting that maintaining this requirement has been an issue for owners and operators. After considering commenters' feedback, EPA concluded that the historic level of regulation for these tanks is appropriate and provides adequate environmental controls to ensure environmental protection. Therefore, this final UST regulation continues to require that owners and operators of these tanks comply with the requirements of § 280.11. Because EPA is partially excluding these systems, the term interim prohibition no longer applies. Therefore, EPA is rewording the title of § 280.11 to *Installation requirements for partially excluded UST systems*.

In addition, EPA is changing § 280.11(a) to reflect that these requirements are installation requirements rather than prohibitions on installation.

After considering comments and additional information, this final UST regulation excludes owners and operators of these tanks from 40 CFR part 280, subparts B (*UST Systems: Design, Construction, Installation and Notification*); C (*General Operating Requirements*); D (*Release Detection*); E (*Release Reporting, Investigation, and Confirmation*); G *(Out-of-Service UST Systems and Closure*); H (*Financial Responsibility*); J (*Operator Training*); and K (*UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems*). Owners and operators of these tank systems are still required to comply with subparts A (*Program Scope and Installation Requirements for Partially Excluded UST Systems*) and F (*Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances*).

This final UST regulation also amends § 280.10(c)(4) which refers to facilities licensed under 10 CFR part 50. This change is consistent with the regulatory citation listed in the Spill Prevention, Control, and Countermeasure provision in 40 CFR part 112 and also applies to installation of these tanks at NRC facilities in the future.

D. *Other Changes*

1. Changes to Overfill Prevention Equipment Requirements

Through extensive stakeholder outreach, EPA identified vent line flow restrictors (also called ball float valves) as a significant concern for operability and safety. As a result, this final UST regulation modifies the 1988 UST regulation by eliminating vent line flow restrictors as an

option for meeting the overfill prevention equipment requirement for new tank installations and when overfill prevention equipment is replaced. EPA makes this change to: reduce the frequency of UST releases due to operability issues, address system safety concerns, and address personnel safety concerns. Below are the issues:

- Operability – For a vent line flow restrictor to operate properly, the device must restrict the flow of regulated substance into the UST when the flow restrictor engages. If the tank top is not liquid or vapor tight, flow into the UST is not restricted because vapors continue to escape through non-tight areas. If vapors continue to escape from the UST, there is no pressure buildup in the vapor area of the tank, resulting in no reduced flow rate into the UST. Examples where non-tight tank tops may result in ineffective flow restrictors include: loose tank bungs or other tank top components; tanks with coaxial stage I vapor recovery installed; and tanks with both tank top and remote fill areas.
- System safety – Vent line flow restrictors can create safety concerns when they activate. USTs can become over pressurized and be damaged during deliveries when product is pumped into the tank. PEI's recommended practice for installation, RP 100, advises against using vent restriction devices because the vent line flow restrictor pressurizes the UST, creating a hazardous condition when the device operates as designed.
- Personnel safety – Delivery personnel can be sprayed with regulated substances when they disconnect the delivery hose from the fill pipe because pressure can build up in the tank when the vent line flow restrictor activates.

Owners and operators may continue to use flow restrictors not in vent lines (such as flow restrictors in fill pipes), automatic shutoff devices, and high level alarms to meet the overfill prevention requirement for their UST systems.

Owners and operators using a vent line flow restrictor before the effective date of this final UST regulation may continue using it to meet the overfill prevention requirement, as long as it operates properly by restricting the flow of regulated substances into the UST when the device activates. Flow restrictors in vent lines must be periodically inspected for proper operation according to section B-3, Overfill Prevention Equipment Inspections. This means that the flow restrictor will need to be accessible to the person inspecting the overfill prevention device. In addition, owners and operators may continue to use flow restrictors in UST system vent lines for reasons other than meeting the overfill prevention requirement, as long as the flow restrictors do not interfere with operation of the overfill prevention equipment being used.

Most commenters supported this change to the 1988 UST regulation. Several even suggested requiring retrofits of vent line flow restrictors with another type of overfill prevention equipment. Because EPA is concerned about imposing too many additional costs on owners and operators of existing UST systems, EPA is not requiring retrofits of existing vent line flow restriction devices, as long as they operate properly, alert delivery personnel, and prevent overfills. Some commenters suggested EPA continue to allow the use of vent line flow restrictors if they meet the criteria set forth in PEI's RP 100. EPA reviewed the PEI recommended practice and noted that the code sets criteria for the allowed use of vent line flow restrictors. However, more importantly, the code advises against using vent line flow restrictors for overfill prevention under any circumstance because they pressurize the UST, creating a hazardous condition when the device operates as designed. Consistent with PEI's RP 100 advisory, EPA is not allowing owners and operators to use vent line flow restrictors in new tanks or when overfill prevention equipment is replaced. Finally, several commenters suggested EPA continue to allow the use of vent line flow restrictors, as long as the flow restrictor can be shown

to operate effectively. Because it is difficult to determine if flow restrictors in vent lines will effectively restrict flow when the tank is close to being full, EPA is not allowing their use in new UST system installations or when overfill prevention equipment is replaced. However, the final UST regulation allows continued use of vent line flow restrictors installed before the effective date of the final UST regulation, as long as they operate properly, alert delivery personnel, and prevent overfills.

2. Internal Linings that Fail the Periodic Lining Inspection and Cannot Be Repaired

About 3 percent of tanks rely on internal lining as the sole method of corrosion protection to meet the 1988 UST regulation.[104] Tanks that were internally lined to meet the 1988 UST regulation corrosion protection requirement at § 280.21 are typically older, bare steel tanks installed before 1986. The 1988 UST regulation preamble says that internal lining, when used as the sole method for corrosion protection, is not regarded as a permanent upgrade. However, it is adequate if the lining continues to meet original design specifications. If the internal lining no longer meets original design specifications and cannot be repaired according to industry codes, then the lined tank is subject to unprotected tank requirements and must be replaced after 1998. However, this language, which was in the 1988 UST regulation preamble, was inadvertently omitted from the 1988 UST regulation.

This final UST regulation modifies the 1988 UST regulation by requiring owners and operators to permanently close an UST that uses internal lining as the sole method of corrosion

[104] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

protection for the tank when the lining inspection determines the internal lining is no longer performing according to original design specifications and the internal lining cannot be repaired according to a code of practice developed by a nationally recognized association or independent testing laboratory. EPA understands that codes of practice for internal lining inspections in use as of publication of this final UST regulation contain pass or fail criteria for the internal lining and criteria for allowing repairs to an internal lining that fails the internal lining inspection.

Owners and operators using internal lining as the sole method of corrosion protection for the tank may continue using that method as long as the internal lining is periodically inspected according to § 280.21(b)(1)(ii) and the internal lining passes the inspection or is repaired so it meets original design specifications according to a code of practice developed by a nationally recognized association or independent testing laboratory.

Consistent with current EPA policy, [105] tanks using the combination of cathodic protection and internal lining for corrosion protection are not required to be closed if the internal lining fails and cannot be repaired, as long as the cathodic protection is operated and maintained according to § 280.31 and the tank was assessed and found to be structurally sound and free of corrosion holes when the cathodic protection was added to the tank. In addition, owners and operators may use internal linings for purposes other than meeting EPA's corrosion protection upgrade requirement (for example, internal linings used for compatibility or secondary containment).

Most commenters supported this change to the 1988 UST regulation. Some even suggested more restrictive requirements: either phasing out internal lining as a corrosion protection upgrade or permanently closing an UST if the lining inspection failed. EPA is not

[105] EPA UST Technical Compendium Question And Answer # 14: www.epa.gov/oust/compend/nus.htm

requiring these more restrictive approaches because we think internal lining repairs can be appropriate and protect the environment when conducted according to a code of practice developed by a nationally recognized association or independent testing laboratory. In addition, requiring permanent closure under these more restrictive circumstances would place additional financial burdens on UST owners and operators. Several commenters offered adding cathodic protection and relining the tank as alternatives to permanent closure. EPA is not including these options in this final UST regulation because internally lined tanks that fail the lining inspection and cannot be repaired according to a code of practice are generally older and are nearing or past the end of their useful lives.

3. Notification

This final UST regulation adds a one-time notification of existence for UST systems with field-constructed tanks and UST systems identified as airport hydrant fuel distribution systems. In addition, it adds a new notification requirement for ownership changes; provides a new form for making notification of ownership changes; and makes minor changes to the notification language and notification form.

EPA agrees with commenters who opposed requiring one-time notification of existence for emergency power generator UST systems as was proposed. Commenters explained, and EPA agrees, that since the 1988 UST regulation deferred these systems only from the release detection requirements in subpart D, owners should have notified the appropriate implementing agency within 30 days of bringing an UST system into use in accordance with the notification requirements in subpart B. Therefore, in this final UST regulation, the requirement to submit a

one-time notification of existence applies only to owners of UST systems with field-constructed tanks and airport hydrant fuel distribution systems. (This one-time notification of existence does not apply to wastewater treatment tank systems, UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954, and UST systems that are part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50 previously deferred in the 1988 UST regulation and partially excluded in this final UST regulation.)

Furthermore, EPA agrees with commenters' requests to extend the time frame of 30 days in the 2011 proposed UST regulation for owners of UST systems with field-constructed tanks and airport hydrant fuel distribution systems to submit their one-time notification of existence. To provide owners more time for identifying and gathering information about these previously deferred systems, EPA is allowing owners of existing UST systems with field-constructed tanks and airport hydrant fuel distribution systems to submit a one-time notification of existence within 3 years of the effective date of this final UST regulation. EPA is requiring owners of UST systems with field-constructed tanks and airport hydrant fuel distribution systems brought into use after the effective date of the final UST regulation to submit notification forms; this notification requirement has been in place since 1986 for all UST owners bringing new USTs into use. See subpart K for other requirements related to UST systems with field-constructed tanks and airport hydrant fuel distribution systems.

Several commenters requested EPA allow 60 days instead of 30 days to submit a notification of ownership change, noting that the 30-day requirement is too stringent. One commenter stated that the time frame should be relaxed to account for large organizations where paperwork could involve a significant amount of time to process. Another stated that 30 days

would be too short and unduly burdensome on small businesses. While EPA fully considered these comments, EPA thinks it is important for the ownership change notification requirement to be consistent with the new tank notification requirement (within 30 days of bringing an UST into use) in place since 1988. In addition, the ownership change notification form is shorter and takes less time to complete than the new tank notification form. As a result, this final UST regulation requires owners to submit a notification of ownership change within 30 days of assuming ownership of regulated UST systems.

In this final UST regulation, EPA provides a new notification form titled *Notification of Ownership Change for Underground Storage Tanks* under appendix II. This form supplants the *List of Agencies Designated to Receive Notifications* in appendix II of the 1988 UST regulation. The list, published in 1988, contained agency names, addresses, and phone numbers, many of which are no longer accurate. EPA considered updating the list, but given the frequency with which contact information changes, decided it is pointless to publish information in the final UST regulation since it will quickly become obsolete. Rather, owners can obtain current agency contact information on EPA's website at www.epa.gov/oust.

Two commenters indicated it was unclear who the implementing agency is and whether owners and operators need to notify both the state and EPA. In this final UST regulation, EPA is clarifying that owners must submit notification forms to the appropriate implementing agency. The term implementing agency is defined in the UST regulation and owners can obtain current contact and other information regarding their implementing agency on EPA's website at www.epa.gov/oust. In practice, EPA expects most owners will submit notification forms only to their respective state as their implementing agency, except in instances where the implementing agency is EPA. For example, EPA is the implementing agency for USTs located in Indian

country; thus, owners with USTs in Indian country will submit their notification forms to EPA. Owners should also be aware that individual states may have state versions of notification forms which owners should use instead when submitting to the implementing agency. EPA is revising the regulatory language in § 280.22(a) and (b) and including language in subpart K to reflect that state forms may be used if the state requires owners to use notification forms that differ from those in appendices I and II.

Lastly, EPA is amending the notification form in appendix I and the ownership change form in appendix II to incorporate comments regarding specific items on these forms. For example, two commenters noted that owners of previously deferred UST systems would be unable to complete the Certification of Installation section of the *Notification for Underground Storage Tanks* form because they were not subject to this requirement when the UST system was brought into use. In addition, records of installation for these previously deferred UST systems are likely to be nonexistent given the passage of time since installation. EPA agrees with these commenters and is revising the notification form to indicate that only owners of UST systems with field-constructed tanks and airport hydrant fuel distribution systems brought into use after the effective date of this final UST regulation need to complete this section.

4. Compatibility

Regulated Substance and Motor Fuel Definitions

This final UST regulation revises the regulated substance definition to clarify that UST systems containing petroleum derived from non-crude oil products are regulated. The preamble

to the supplement of the proposed 1988 UST regulation indicates that petroleum products can be derived from other materials, such as biomass, plant material, organic waste, coal, and shale oil. [106] Petroleum is comprised of a complex blend of hydrocarbons regardless of its source material.

Many people applied the definition of regulated substance in the 1988 UST regulation to petroleum UST systems only if the petroleum was derived from crude oil. This final UST regulation clarifies that petroleum derived from non-crude oil based products, such as green gasoline, is a regulated substance under 40 CFR part 280. This clarification is consistent with the preamble to the 1988 UST regulation, which indicates petroleum is not limited to being derived from crude oil.

This final UST regulation also modifies the definition of motor fuel to better accommodate new motor fuels that may be marketed and stored in the future. The definition in the 1988 UST regulation listed motor fuel products. This led to confusion as to whether new fuels, such as petroleum blended with ethanol or biodiesel, are motor fuels. This final UST regulation clarifies the definition of motor fuel and explains that it is any fuel typically used to operate a motor engine. In addition, EPA received comments to change the motor fuel definition from petroleum and petroleum-based substances to a complex blend of hydrocarbons. EPA agrees that using the phrase complex blend of hydrocarbons eliminates ambiguity; it provides a clearer definition of motor fuel by including complex blends of hydrocarbons that may not be petroleum or petroleum-based. EPA is making this change in this final UST regulation.

Compatibility

[106] "40 CFR Parts 280 and 281 USTs; Supplement to Proposed Rule," 52 FR 48640 (December 23, 1987).

EPA understands that the chemical and physical properties of ethanol and biodiesel can be more degrading to certain UST system materials than petroleum alone. As the use of ethanol- and biodiesel-blended fuels increases, EPA is concerned that not all UST system equipment or components are compatible with these fuel blends. For purposes of compatibility, EPA uses the term equipment to mean a group of components assembled together by the manufacturer. Compatibility can be determined for all components of a piece of equipment. Compatibility determinations for equipment are typically useful when an UST system is newly installed or when a complete piece of equipment is replaced. Examples of equipment include the piping system, STP assembly, and automatic shutoff device assembly. A component is considered an individual piece of an UST system and is typically a single piece of the equipment. Component compatibility is determined on a piece by piece basis. A component compatibility determination is typically needed when performing repairs on an UST system where only parts of a piece of equipment are replaced. Examples of components include gaskets, seals, and other individual pieces that form a piece of equipment.

Gasoline containing 10 percent or less ethanol (E10) has been used in parts of the United States for many years. UST equipment and component manufacturers accommodated the E10 market by producing compatible equipment and components. According to the Renewable Fuels Association, ethanol is blended into over 90 percent of all gasoline sold in the United States,[107] predominantly as E10. Recently, the United States has been moving toward use of higher blends of ethanol, due in part to federal and state laws encouraging increased use of biofuels. While most UST system equipment and components are compatible with E10, fuel blends containing greater than 10 percent ethanol do not have a long history of storage and may not be compatible

[107] Renewable Fuels Association, *Building Bridges to a More Sustainable Future: 2011 Ethanol Industry Outlook*. http://www.ethanolrfa.org/page/-/2011%20RFA%20Ethanol%20Industry%20Outlook.pdf?nocdn=1

with certain materials in existing UST systems. According to a 2011 report published by the U.S. Department of Energy's Oak Ridge National Laboratory,[108] some elastomeric materials are particularly affected by intermediate ethanol blends and certain sealants may not be suitable for any ethanol-blended fuels. A 2007 report from Underwriters Laboratories (UL)[109] evaluated the effect of 85 percent ethanol and 25 percent ethanol blends on dispenser components. Results indicated some materials used in the manufacture of seals degraded more when exposed to 25 percent ethanol test fluid than when exposed to 85 percent ethanol test fluid. Other literature suggests ethanol fuel blends can be more aggressive toward certain materials than independent fuel constituents, with maximum polymer swelling observed at approximately 15 percent ethanol by volume.[110] Based on this information, this final UST regulation clarifies the compatibility requirements for owners and operators storing regulated substances containing greater than 10 percent ethanol.

This final UST regulation also clarifies the compatibility requirements for owners and operators storing regulated substances containing greater than 20 percent biodiesel. Although the total use of biodiesel is significantly less than that of ethanol, biodiesel has become increasingly available across the United States and may be incompatible with certain materials in UST systems. For example, pure biodiesel (B100) has known compatibility issues with certain materials. According to the U.S. Department of Energy's National Renewable Energy

[108] Oak Ridge National Laboratory, *Intermediate Ethanol Blends Infrastructure Materials Compatibility Study: Elastomers, Metals, and Sealants* (March 2011)
[109] Underwriters Laboratories, Inc., *Underwriters Laboratories Research Program on Material Compatibility and Test Protocols for E85 Dispensing Equipment* (December 2007). Available in the UST Docket under Docket ID No. EPA-HQ-UST-2010-0651
[110] Westbrook, P.A., *Compatibility and Permeability of Oxygenated Fuels to Materials in Underground Storage and Dispensing Equipment* (January 1999). Available in the UST Docket under Docket ID No. EPA-HQ-UST-2010-0651

Laboratory (NREL) *Biodiesel Handling and Use Guide, Fourth Edition*,[111] "B100 will degrade, soften, or seep through some hoses, gaskets, seals, elastomers, glues, and plastics with prolonged exposure…. Nitrile rubber compounds, polypropylene, polyvinyl, and Tygon® materials are particularly vulnerable to B100."

In contrast, the properties of very low blends of biodiesel, such as B5 or less, are so similar to those of petroleum diesel that the American Society for Testing and Materials (ASTM) International considers conventional diesel that contains up to 5 percent biodiesel to meet its *Standard Specification for Diesel Fuel Oils*.[112] For biodiesel blends between 5 and 100 percent, there is very little compatibility information; however, NREL's handling and use guide concludes that biodiesel blends of B20 or less have less of an effect on materials and very low blends of biodiesel, such as B5 and B2, "…have no noticeable effect on materials compatibility."[113] In addition, fleet service sites have stored B20 in UST systems for years, and EPA is not aware of compatibility-related releases associated with those UST systems storing B20. Therefore, this final UST regulation requires tank owners and operators who store greater than 20 percent biodiesel in their UST systems demonstrate compatibility of UST equipment or components by one of the options listed in § 280.32.

This final UST regulation retains the requirement for owners and operators to use UST systems made of or lined with materials that are compatible with the substance stored in the UST system. It does not change the compatibility requirement in the 1988 UST regulation, but does add several options for owners and operators to demonstrate that their UST systems are

[111] National Renewable Energy Laboratory, *Biodiesel Handling and Use Guide, Fourth Edition*, (2009). Available in the UST Docket under Docket ID No. EPA-HQ-UST-2010-0651
[112] ASTM Standard D975, 2010c, *Standard Specification for Diesel Fuel Oils*, ASTM International, West Conshohocken, PA, 2010, DOI: 10.1520/D0975-10C, www.astm.org
[113] National Renewable Energy Laboratory, *Biodiesel Handling and Use Guide, Fourth Edition*, (2009). Available in the UST Docket under Docket ID No. EPA-HQ-UST-2010-0651

compatible with regulated substances containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substances identified by the implementing agency. Owners and operators of these UST systems must meet one of the following options:

- Use equipment or components that are certified or listed by a nationally recognized, independent testing laboratory for use with the fuel stored
- Use equipment or components approved by the manufacturer to be compatible with the fuel stored

In addition, owners and operators may use another option determined by the implementing agency to be no less protective of human health and the environment than the methods listed above.

These options provide owners and operators flexibility in demonstrating compatibility while still protecting human health and the environment. In the past, owners and operators typically demonstrated compatibility by using equipment or components certified or listed by a nationally recognized, independent testing laboratory, such as UL. Many pieces of UST equipment and components in the ground today were manufactured before regulated substances containing ethanol or biodiesel existed and are not approved by nationally recognized, independent testing laboratories for use with these fuel blends. Currently, certain tanks and piping have been tested and are listed by UL for use with higher-level ethanol blends. However, many other pieces of equipment and components of UST systems, such as leak detection devices, sealants, and containment sumps, may not be listed by UL or another nationally recognized, independent testing laboratory for use with these blends.

In addition, EPA is not aware of any nationally recognized, independent testing laboratory that has performed compatibility testing on UST system equipment or components

with biodiesel-blended fuels. Absent certification or listing from a nationally recognized, independent testing laboratory or other verification that the equipment or component may be used with anything other than conventional fuels, the suitability of an UST system for use with biodiesel blends is questionable. As a result, EPA is providing several options for demonstrating compatibility to reduce the risk of releases due to material incompatibility. Owners and operators storing regulated substances blended with greater than 10 percent ethanol or greater than 20 percent biodiesel must meet the compatibility requirements before storing those regulated substances.

For equipment and components tested and approved by a nationally recognized, independent testing laboratory, owners and operators may demonstrate compatibility solely by keeping records of the equipment and components. In this instance, the testing laboratory's listing, labeling, or approval demonstrates the equipment or component's suitability to be used with the regulated substance stored. This means owners and operators will be able to demonstrate compatibility by retaining equipment or component records.

Owners and operators may also demonstrate compatibility by obtaining manufacturer's approval of the equipment or component. The manufacturer's approval must be in writing and include an affirmative statement that the equipment or component is compatible with the fuel blend stored. The manufacturer's approval must also specify the range of fuel blends for which the equipment or component is compatible. The manufacturer's approval must be issued from the equipment or component manufacturer, not another entity, such as the installer or distributor. A manufacturer's approval enables owners and operators to demonstrate compatibility for equipment or components not approved for use by a nationally recognized, independent testing

laboratory. It also provides implementing agencies with verification that the equipment or component is compatible with the fuel stored.

Implementing agencies may approve other options for complying with the compatibility requirement for regulated substances containing greater than 10 percent ethanol or greater than 20 percent biodiesel if they are no less protective of human health and the environment than manufacturer's approval or a listing, labeling, or approval by a nationally recognized, independent testing laboratory. This provides implementing agencies with flexibility to consider other approaches they determine to be appropriate. For example, in lieu of an affirmative compatibility determination, implementing agencies may allow secondarily contained UST systems using interstitial monitoring to store regulated substances containing greater than 10 percent ethanol or 20 percent biodiesel. The rationale is that a leak from the primary containment will be contained by secondary containment and detected by interstitial monitoring equipment before regulated substances reach the environment.

Although these options for demonstrating compatibility apply to UST systems storing regulated substances containing greater than 10 percent ethanol and greater than 20 percent biodiesel, this final UST regulation extends the compatibility demonstration requirement to other regulated substances identified by implementing agencies. This provides implementing agencies with the flexibility to require a demonstration of compatibility if there are concerns about other existing regulated substances and when new regulated substances, such as biobutanol, enter the fuel market.

EPA received comments about the difficulty in determining whether some UST system equipment or components currently installed in the ground are compatible with ethanol and biodiesel blended fuels. In fact, EPA thinks there are many cases where some equipment or

components of UST systems in the ground as of 2014 are not compatible with newer fuels. Unless owners and operators specifically requested all of the UST system be compatible with higher ethanol or biodiesel blends, installers probably installed lower cost options for certain UST system equipment, such as a STP assembly, which may not be compatible with some newer fuels. Non-compatible equipment or components, such as equipment in containment sumps, are usually easier to upgrade or replace than the tank or piping because they are typically located in areas not requiring excavation. In addition, EPA provides various options for meeting the compatibility requirement. To protect the environment from releases of ethanol blends greater than 10 percent, biodiesel blends greater than 20 percent, or any other regulated substance identified by the implementing agency, owners and operators must do one of the following:

- Demonstrate the UST system is compatible through certification or listing by a nationally recognized, independent testing laboratory or manufacturer approval
- Replace equipment or components not compatible or for which compatibility cannot be determined
- Use another option determined by an implementing agency to be no less protective of human health and the environment
- Not store these regulated substances in the UST system

These options provide owners and operators with adequate flexibility when demonstrating compatibility and determining whether certain regulated substances may be stored in the UST system.

Some commenters suggested adding other options owners and operators could use for determining compatibility. One suggested addition was certification by a professional engineer (P.E.), who would perform an on-site UST system analysis to determine compatibility. In order

to perform this analysis, a P.E. would need to know the manufacturer and model of all UST system equipment or components. Because this information cannot be entirely obtained through visual observation, a P.E. would need to obtain records of the equipment to make an assessment and then search for relevant equipment listings or manufacturer certifications. This means a P.E. certification is equivalent to the options in this final UST regulation. EPA does not object to a P.E. performing a records review; however, we think it is impractical for a P.E. to perform a visual assessment of an UST system and make a compatibility determination in the absence of equipment records and certifications. Therefore, EPA is not explicitly allowing a P.E. to make a compatibility determination in the absence of UST system information and compatibility certifications.

Some commenters suggested EPA use a tiered approach to demonstrate compatibility for UST systems storing regulated substances containing greater than 10 percent ethanol and greater than 20 percent biodiesel, and choose one method of determining compatibility. EPA interprets tiered approach to mean requiring the more stringent option first, which is listing by a nationally recognized, independent testing laboratory. If the more stringent option is not available, the second tier would allow manufacturer's approval. This final UST regulation does not include a tiered approach because EPA thinks using this method for demonstrating compatibility makes the final UST regulation too complicated for implementing agencies as well as owners and operators. Even if the UST system equipment or components have a listing from a nationally recognized, independent testing laboratory, we do not always know whether compatibility testing was part of the listing. EPA thinks manufacturers will only issue written claims of compatibility if they have sufficient information to support such claims.

The 2011 proposed UST regulation required owners and operators retain these records:

- For all new and replaced equipment or components – so it is easier to demonstrate whether or not the equipment or component is compatible with the regulated substance stored
- For UST systems storing greater than 10 percent ethanol, greater than 20 percent biodiesel, or other regulated substance identified by the implementing agency – to demonstrate the UST system is compatible with these regulated substances or compliance with alternatives allowed by the implementing agency

However, after careful consideration of comments, this final UST regulation does not require owners and operators maintain records for all new and replaced equipment. EPA decided it is too onerous for owners and operators to maintain this information, which may not transfer when facilities change ownership.

To make it easier for UST owners and operators to comply with the compatibility requirement, this final UST regulation requires that owners and operators notify the implementing agency at least 30 days before switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substance identified by the implementing agency. This notification prior to switching fuels gives the implementing agency an opportunity to inquire about the compatibility of the UST system before owners and operators begin storing the new regulated substance. This notification requirement already exists in some states. For example, Colorado, North Carolina, and South Carolina require UST owners submit a completed compatibility checklist prior to storing some newer fuel blends. To notify, owners and operators may contact implementing agencies via EPA's website at www.epa.gov/oust/.

This final UST regulation requires owners and operators maintain records that demonstrate compliance with § 280.32(b) for as long as the UST system stores greater than 10 percent ethanol, greater than 20 percent biodiesel, or other regulated substances identified by the implementing agency. Owners and operators must retain records for these regulated substances in order to meet this compatibility requirement.

The 2011 proposed UST regulation preamble included an extensive list of UST system equipment and components that must be compatible but that list was not in the 2011 proposed UST regulation. Based on commenter input, this final UST regulation includes a list of UST system equipment and components that owners and operators must demonstrate to be compatible when using the manufacturer's approval and certification or listing options. The UST system equipment or components that owners and operators must demonstrate to be compatible are those related to the tank, piping, containment sumps, pumping equipment, release detection equipment, spill prevention equipment, and overfill prevention equipment. These items are a subset of an UST system, as defined by § 280.12, which, if incompatible, could lead to a release.

This changes protect human health and the environment from potential releases from incompatible UST systems. These changes are not overly burdensome, nor do they require costly retrofits. They give owners and operators flexibility, yet provide EPA with confidence that UST systems are compatible with new fuel blends when owners and operators use one or more of the options to determine compatibility. This final UST regulation provides owners and operators with certainty about which options are allowed for demonstrating UST system compatibility with the substances stored.

Finally, EPA is removing from the compatibility section of the 1988 UST regulation API Recommended Practice 1627, which is a code of practice related to methanol-blended fuels.

EPA included this code of practice in the 1988 UST regulation to help owners and operators demonstrate compliance with the compatibility requirement for methanol-blended fuels. However, EPA's subsequent review of this code revealed no substantial information about determining compatibility of UST systems with methanol-blended fuels. In August 2010, API published an updated version of API Recommended Practice 1626, which is a code of practice for storing and handling of ethanol-blended fuels. In the 2011 proposed UST regulation, EPA removed this code of practice because the proposed UST regulation provided specific requirements about how owners and operators may demonstrate compatibility for their UST systems. However, because commenters pointed out the code of practice includes requirements for demonstrating compatibility of UST systems with ethanol-blended fuels, EPA is including it as a code of practice that may be useful in complying with the compatibility section in this final UST regulation.

5. Improving Repairs

Changes to the Definition of Repair

This final UST regulation adds these UST system components to the definition of repair: piping; spill prevention equipment; overfill prevention equipment; corrosion protection equipment; and release detection equipment. The 1988 UST regulation definition of repair used the generic term UST system component and provided no detail about what an UST system component is. By adding these UST system components, EPA is making it clear that these specific components are subject to the repairs allowed section of the final UST regulation. This

means owners and operators performing repairs on these UST system components must follow the repairs allowed section (§ 280.33).

Owners and operators commonly fix UST components that have not caused a release of regulated substance from the UST system. However, the repair definition in the 1988 UST regulation did not consider these types of fixes as repairs since they were not associated with releases. This final UST regulation removes the link that a repair is only associated with a release, requiring owners and operators meet the repairs allowed section (§ 280.33) when fixing UST system components that have failed to function properly, even if they have not caused a release of product from the UST system. This change means owners and operators must perform repairs in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and test or inspect the repaired equipment. This change ensures repair activities separate from a release are conducted properly. For example, under the 1988 UST regulation, fixing a cathodic protection system was not considered a repair. In this final UST regulation, this activity is considered a repair that must meet the repair requirements in § 280.33.

EPA proposed adding a suspected release as part of the definition of repair, so repairs associated with suspected releases are covered under the repair definition. However, based on comments received, EPA is not including suspected release as part of the definition of repair in this final UST regulation because that circumstance is already covered under the "failed to function properly" language in the repair definition. EPA disagrees with commenters suggesting EPA remove the "failed to function properly" language because EPA thinks repairs need to occur both when a release occurs and when UST system equipment fails to function properly.

Finally, based on comments received, EPA is adding clarifying language to the repair

definition to ensure UST system component repairs restore components to proper operating condition.

Tests or Inspections After Repairs

This final UST regulation adds new testing or inspection requirements for spill, overfill, and secondary containment equipment following a repair and allows owners and operators up to 30 days following the repair to test or inspect the repaired UST component. EPA acknowledges that some secondary containment can be tested through normal release detection if vacuum, pressure, or liquid-filled methods of interstitial monitoring are used as the method of release detection. In these cases, the secondary containment test occurs automatically, making it unnecessary to perform additional testing.

EPA agrees with commenters about using the term inspecting rather than testing as it relates to the operability of overfill prevention equipment. Performing inspections will avoid potentially overfilling the tank while ensuring the overfill prevention equipment operates properly. EPA is revising the overfill prevention equipment test to be an overfill prevention equipment inspection.

EPA agrees with commenters who indicated that testing or inspection following repair should only apply to the component or components repaired and not to the entire UST system. This final UST regulation requires testing or inspection, as appropriate, following a repair only for those UST system components repaired and not to all components at the UST site. In addition, EPA is requiring owners conduct a test of the secondary containment area (including containment sumps) only if the secondary containment area is repaired and that area is used for

interstitial monitoring. Note that all secondary containment areas must use interstitial monitoring for tanks and piping installed 180 days after the effective date of this final UST regulation (see section A-2, Secondary Containment for additional information). Repairs to the primary containment areas of a tank or piping may be tested using other options for tanks and piping listed in the repairs section.

Several commenters expressed concern that replacing UST system components that have not yet failed to function properly would trigger the repair requirements. If owners and operators choose to replace UST system components, those components must meet the installation requirements in § 280.20(d). Therefore, replaced UST system components do not have to meet the repair requirements in § 280.33.

EPA solicited comments about whether to consider requiring tests or inspections of spill, overfill, and secondary containment areas before returning the UST system to service, rather than within 30 days of the repair. Many commenters were supportive of requiring testing or inspection before bringing the UST system back into service. However, this final UST regulation allows owners and operators up to 30 days following the repair to conduct testing or inspections. EPA thinks owners and operators need to test or inspect the repaired component as soon as possible following the repair. However, EPA understands there are circumstances where testing or inspection before returning the UST system to service may be impractical (for example, weather conditions, remote locations, or the need to schedule a test). In these examples, the UST system would remain out of service until the test or inspection is completed, resulting in unnecessary UST system down time for owners and operators. Thirty days allows some flexibility for completing the test or inspection, while allowing the UST system to return to service.

6. Vapor Monitoring and Groundwater Monitoring

This final UST regulation retains vapor monitoring and groundwater monitoring as methods of release detection for tanks and piping installed before the effective date of this final regulation, as long as owners and operators demonstrate proper installation and performance through a site assessment. In addition, this final UST regulation revises the recordkeeping requirement in § 280.45, which means owners and operators must maintain site assessments according to § 280.43(e)(6) and (f)(7) for as long as these release detection methods are used.

In the 2011 proposed UST regulation, EPA phased out vapor monitoring and groundwater monitoring over a five year time frame. However, EPA received significant comments in support of retaining these release detection methods. Many commenters presented circumstances where EPA should allow owners and operators to use vapor monitoring and groundwater monitoring such as: until the system is replaced and the secondary containment requirement is triggered; or when the UST implementing agency already has or will establish additional criteria for use. In addition, commenters suggested EPA continue allowing certain UST systems to use vapor monitoring and groundwater monitoring, specifying emergency generator tanks, certain high-throughput UST systems, or specific low-throughput systems. EPA also received numerous requests to expand our proposed release detection options for airport hydrant fuel systems and field-constructed tanks to allow the use of vapor monitoring or groundwater monitoring. Under the 2011 proposed UST regulation, these options are not acceptable release detection options for owners and operators of airport hydrant systems and field-constructed tanks.

EPA agrees with commenters that owners and operators of emergency generator tanks, certain high-throughput UST systems, and specific low-throughput systems could benefit from continued use of vapor monitoring and groundwater monitoring until owners and operators replace their UST systems to meet the secondary containment requirement necessitating interstitial monitoring. EPA thinks that requiring owners and operators to maintain the site assessment will increase environmental protection appreciably beyond the 1988 UST requirements. Implementing agencies have noted that site assessments often do not exist for vapor or groundwater monitoring. Thus, by requiring site assessment records, we will ensure vapor and groundwater monitoring wells are properly located and function as effective release detection. EPA also thinks that allowing these release detection options to be customized and used for airport hydrant systems and field-constructed tanks will make it easier for owners and operators to comply with the release detection requirement.

Therefore, this final UST regulation continues to allow vapor and groundwater monitoring as long as owners and operators maintain a site assessment that demonstrates the release detection method meets the requirements in this final UST regulation. Owners and operators of airport hydrant systems and field-constructed tanks will have to meet the requirements for vapor monitoring and groundwater monitoring described in subpart K (see section C-2 for additional information).

The 1988 UST regulation defined criteria for the use of both release detection methods as explicitly as possible, given the large variation of site-specific conditions at UST sites across the country. EPA supports UST implementing agencies' efforts to better define site assessment criteria specific to their local geology in addition to what is required in the UST regulation. EPA also acknowledges and supports several UST implementing agencies' efforts in conducting

construction certification and recertification inspections. However, EPA has not analyzed the economic burden construction certification and recertification inspections would place on UST implementing agencies and potentially UST system owners and operators. Therefore, this final UST regulation does not require installation inspections, certification, or recertification inspections of monitoring wells. EPA expects UST implementing agencies will continue reviewing and accepting site assessments according to their program policies.

In the event of a confirmed release at an UST site, vapor monitoring and groundwater monitoring are no longer acceptable options for release detection unless a new site assessment for the release detection method is conducted. If a release is confirmed, an owner and operator will have to remediate the site according to 40 CFR part 280, subpart F. Following site remediation, and as long as replacement of the UST system does not trigger the secondary containment requirement, an owner and operator must obtain a new site assessment to verify appropriate use of these methods, if the owner and operator chooses to continue using vapor monitoring or groundwater monitoring as the primary release detection method. Otherwise, owners and operators must use another method of release detection according to subpart D or subpart K.

At the time of the 2011 proposed UST regulation, EPA estimated approximately 5 percent of all active UST systems were using vapor monitoring or groundwater monitoring to comply with release monitoring requirements.[114] Commenters confirmed that 5 percent of vapor monitoring and groundwater monitoring was accurate. EPA also confirmed that although the methods are used very infrequently in the majority of jurisdictions, there is considerably high use

[114] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

in certain states. Arkansas, Louisiana, and Mississippi have a significant number of owners and operators using vapor monitoring, groundwater monitoring, or a combination of the two methods. Estimated use of both methods in these states is 29 percent, 12 percent, and 65 percent, respectively. Confirmation of high use in one particular geographic area of the country influenced EPA's decision to continue allowing use of these methods.

EPA agrees with comments about major benefits for UST system owners and operators to use backup release detection, whether it is vapor monitoring, groundwater monitoring, or another method. However, neither the 1988 UST regulation nor this final UST regulation requires a secondary 30 day release detection method.

EPA discussed several issues in the 2011 proposed UST regulation that prompted our proposal to no longer allow vapor monitoring and groundwater monitoring as primary methods of release detection. However, the requirement in this final UST regulation for owners and operators to maintain the record of a site assessment for as long as the method is used will address most of these issues.

If the site assessment is available when inspecting USTs, UST implementing agencies can confirm proper installation and use of monitoring wells. For example, if inspectors find what they believe to be insufficient numbers of wells or wells improperly located to sufficiently monitor all portions of the tank or piping that routinely contain product, inspectors will be able to reference the site assessment to determine adequacy of the wells.

The site assessment will also help UST implementing agencies determine whether certain conditions, which allow users to switch between vapor monitoring and groundwater monitoring due to seasonal variations, have been met. Monitoring wells must be properly constructed and installed to meet all criteria in § 280.43(e) and (f). Wells used for vapor monitoring must allow

vapors to collect; wells used for groundwater monitoring must be screened to prevent clogging and intercept the water table at both high and low groundwater conditions while being sealed from the ground to the top of the filter pack. Information regarding acceptability of the same wells used for both methods of release detection must be documented in the site assessment.

In the 2011 proposed UST regulation, EPA discussed issues that were specific to vapor monitoring. These issues will be addressed when owners and operators maintain the site assessment for as long as the method is used. The site assessment will contain information on site conditions, such as whether porosity of the surrounding soil is sufficient. The site assessment will confirm that vapors to be monitored will be unaffected by groundwater, rainfall, or soil moisture. Perhaps the most crucial information in the site assessment is the background contamination level at the site. This will allow owners, operators, and implementing agencies to determine whether that level interferes with monitoring methods. It also marks the threshold for determining a release has occurred when monitoring for petroleum hydrocarbons.

Maintaining the site assessment also addresses specific groundwater monitoring issues EPA discussed. Groundwater at times can be more than 20 feet from the ground surface, due to seasonal water table variations. This can result in the depth to groundwater requirement not being met. Unless an analysis is performed and valid documentation regarding use of the wells for vapor monitoring during low water table conditions is included in the site assessment, the wells will be restricted for groundwater monitoring use only.

In cases where there is no site assessment or an assessment does not sufficiently ensure requirements in § 280.43(e) or (f) are met, UST system owners and operators must reassess the site and maintain documentation required in § 280.43(e)(6) and (f)(7) in order to continue using groundwater or vapor monitoring as a method of release detection. At a minimum, a

professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the UST implementing agency must sign the new site assessment.

EPA understands that in Arkansas, Louisiana, and Mississippi, where the methods are commonly used and account for the majority of use in the country, most UST system owners and operators or the UST implementing agency have sufficient documentation of the site assessment. This means most owners and operators in those states will not need to conduct a new site assessment to comply with this final UST regulation. Owners and operators in other areas of the country may need to conduct a site assessment in order to continue using vapor monitoring or groundwater monitoring.

This final UST regulation also addresses another major aspect associated with vapor monitoring and groundwater monitoring methods. Equipment that is used as part of these release detection methods requires proper operation and maintenance in order to provide optimal monitoring results. Operation and maintenance requirements for electronic and non-electronic equipment are addressed in the release detection equipment testing requirement discussed in section B-5 and the walkthrough inspection requirement in section B-1, respectively.

7. Interstitial Monitoring Results, Including Interstitial Alarms, Under Subpart E

This final UST regulation clarifies UST owners' and operators' responsibilities regarding interstitial monitoring results, including alarms, under 40 CFR part 280, subpart E. Specifically, EPA is making these changes:

- § 280.50(b) - adding liquid in interstitial spaces of secondarily contained UST systems as

an example of an unusual operating condition and adding to the list of criteria for not being required to report a suspected release that any liquid in the interstitial space not used as part of the interstitial monitoring method must be removed

- § 280.50(c) - clarifying that an alarm during release detection monitoring is subject to the reporting requirement and describing exceptions to the reporting requirement
- § 280.52(a) - adding owners and operators as appropriate must conduct secondary containment testing, and clarifying actions UST owners and operators must take if a test confirms a leak into the interstitial space or indicates a release to the environment

The 1988 UST regulation implicitly covered interstitial monitoring when reporting suspected releases because it was a method of release detection. This final UST regulation makes changes to explicitly cover interstitial monitoring and reinforce that a leak into an interstitial space of a secondarily contained UST system also indicates a potential threat to the environment; leaks must be investigated, addressed, and as necessary, reported.

This final UST regulation requires interstitial monitoring for all new or replaced tanks and piping (see section A-2, Secondary Containment). As new systems are installed, interstitial monitoring will become more widely used as a method of release detection. With this in mind, EPA wants UST owners and operators to clearly understand how interstitial monitoring results, including interstitial alarms, must be handled.

In the 1988 UST regulation, EPA indicated that product or water in the interstice, and alarms signifying the presence of those conditions, are unusual operating conditions and must be investigated appropriately. However, EPA did not indicate how UST owners and operators were to address discrepancies with interstitial spaces. As a result, some UST owners and operators were uncertain about how best to respond to interstitial monitoring results and alarms associated

with interstitial monitoring that indicate a release may have occurred. To alleviate uncertainty for owners and operators, EPA provides information below about interstitial monitoring and responses to alarms.

This final UST regulation revises § 280.50(b) by adding interstitial spaces of secondarily contained UST systems and clarifying the presence of liquid in this space as an unusual operating condition unless the liquid is used for interstitial monitoring or meets the requirements described in § 280.43(g)(2)(iv). Water in the interstitial space (presumably from a breach in the secondary wall) and product in the interstitial space (presumably from a breach in the primary wall) are the two typically encountered liquids discovered in the interstice. However, EPA is using the broader term liquid to cover water, product, or other substances in the liquid-phase in the interstitial space. Any liquid in this space not used for interstitial monitoring or not meeting the requirements described in § 280.43(g)(2)(iv) indicates there is an UST system problem that needs to be resolved. As a result, EPA is specifying this as an unusual operating condition and is requiring UST owners and operators investigate and address it.

Several commenters suggested changes to § 280.50(b) of the 2011 proposed UST regulation. Suggestions included: deleting that water or product in the interstice is reportable and clarifying the requirement that the unexplained presence of water or product is an unusual operating condition. Based on comments, EPA in § 280.50(b) of this final UST regulation is using the term liquid, rather than water or product, to address any liquid in the interstitial space. To add clarity to this final UST regulation, EPA is also restructuring the section to provide subsections with separate examples of unusual operating conditions. This final UST regulation also allows owners and operators to not remove or report liquid under two conditions: within secondary barriers described in § 280.43(g)(2)(iv), as long as interstitial monitoring is not

rendered inoperative, or the liquid is used as part of the interstitial monitoring method.

EPA is clarifying in § 280.50(c) that an alarm during release detection monitoring, which indicates a potential release or compromise of the interstitial space, is subject to the reporting requirement. UST owners and operators must appropriately address all release detection monitoring alarms. For example, some interstitial monitoring systems will trigger an alarm, which indicates a potential release or that the interstitial space has been compromised. In subpart E, EPA is adding interstitial monitoring to emphasize its importance because the secondary containment requirement for new and replaced systems in section A-2 will increase the use of interstitial monitoring. UST owners and operators are not required to report alarms from defective system equipment or components or alarms that are investigated and determined to be a non-release. Also, UST owners and operators do not have to report leaks, which are contained in the interstitial space; but owners and operators must investigate and repair problems. Except as provided in § 280.43(g)(2)(iv), any liquid in the interstitial space not used as part of the interstitial monitoring method, such as brine filled, must be removed.

Several commenters misunderstood EPA's discussion regarding reporting alarms. In the 2011 proposed UST regulation, EPA intended that owners and operators need to investigate all alarms, but only report confirmed releases and suspected releases that could not be ruled out by an investigation. Commenters suggested these changes to EPA's 2011 proposed UST regulation at § 280.50(c): deleting language pertaining to alarms; changing language regarding the time allowed to repair, recalibrate, or replace defective system equipment; and including an exception for reporting alarms that have been confirmed to be false alarms. Based on comments, EPA in § 280.50(c) of this final UST regulation is expanding and describing exceptions to reporting monitoring results, including investigation of an alarm from a release detection method that

indicates a release may have occurred.

EPA is adding secondary containment testing, as appropriate, to the release investigation and confirmation steps in § 280.52(a) of the final UST regulation. EPA thinks it is important to clarify actions UST owners and operators must take if a test confirms a leak into the interstitial space or indicates a release has occurred. If a leak into the interstice is confirmed, an UST owner and operator must correct or address the problem. In addition to options listed in the 1988 UST regulation, this final UST regulation includes closure as an option when an owner and operator confirms a release. Nothing in this final UST regulation changes the requirement in subpart F for an UST owner and operator to take corrective action if a release occurred.

In the 2011 proposed UST regulation, EPA suggested that UST owners and operators follow integrity test requirements, now referred to as secondary containment testing, of the interstitial area. Many commenters noted that tank tightness testing or line tightness testing may be more appropriate tests to confirm a suspected release under certain circumstances, and UST system owners and operators should be allowed the choice of determining which test to use. EPA agrees and is revising § 280.52(a) to indicate use of secondary containment testing as appropriate.

EPA received several comments about the terms release and leak used throughout the 2011 proposed UST regulation and the 1988 UST regulation. Historically, EPA used these terms interchangeably. As a result of EPA's new secondary containment and interstitial monitoring requirement (see section A-2, Secondary Containment), there is now a subtle but important distinction between the terms. The term release is defined in the Solid Waste Disposal Act. EPA provides the same definition of release in the UST regulation at § 280.12. Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into

groundwater, surface water or subsurface soils. A release always reaches the environment. The term leak in this final UST regulation is a more general term that includes both cases of when a regulated substance enters into a contained area (such as secondary containment) but has not yet reached the environment and when a regulated substance reaches the environment (a release). Therefore, the term release is a subset of the more general term leak. Note that leaks and releases have investigation and reporting requirements in subpart E.

As a result of distinguishing between a leak and a release, EPA is clarifying the definition of release detection. The 1988 UST regulation defined release detection as determining whether a release of a regulated substance occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it. This final UST regulation revises the definition of release detection to clarify regulated substances entering into the interstitial space are leaks instead of releases. This final UST regulation defines release detection as determining whether a release of a regulated substance occurred from the UST system into the environment or a leak occurred into the interstitial space between the UST system and its secondary barrier or secondary containment around it. This change allows EPA to continue to use the term release detection as it applies to both leaks and releases.

E. *General Updates*

1. Incorporate Newer Technologies

Since EPA promulgated the 1988 UST regulation, newer tank, piping, and release

detection technologies have been developed and are being used. EPA is incorporating several of these newer technologies in this final UST regulation. In addition, because the 1988 UST regulation closure requirements unintentionally restrict use of a newer tank within a tank technology, EPA is revising closure requirements to provide additional flexibility for implementing agencies to allow field-constructed tank technologies that construct a tank within an existing closed tank. However, EPA is not specifically including field-constructed tank within a tank technologies in the new tank standards section in § 280.20 of the final UST regulation, because the tank construction technologies currently covered in this section include both factory constructed and field-constructed technologies. Note that § 280.20(d) requires new UST systems, including tank within a tank technologies, to be properly installed according to a code of practice developed by a nationally recognized association or independent testing laboratory and the manufacturer's instructions.

Clad and Jacketed Tanks

This final UST regulation adds steel tanks that are clad or jacketed with a non-corrodible material to the list of specific new tank design and construction options for UST systems. EPA estimates 10 percent of regulated tanks today are jacketed with a non-corrodible material and 18 percent are clad with a non-corrodible material.[115]

The 1988 UST regulation allowed a steel-fiberglass-reinforced-plastic composite tank (also called a fiberglass clad tank), but did not specifically include other non-corrodible

[115] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

claddings. In addition to fiberglass, manufacturers in 2014 are using other non-corrodible materials claddings for steel tanks, which are listed by UL standard 1746, *External Corrosion Protection Systems for Steel Underground Storage Tanks*. These tank technologies are effective at preventing corrosion of the portion of the steel tank shell in contact with the ground. EPA considers a cladding to be a non-corrosive dielectric material, bonded to a steel tank with sufficient durability to prevent external corrosion during the tank's life.

Because they were not commonly used at the time, EPA did not include jacketed tanks in the 1988 UST regulation. These tanks are now: more commonly used; UL 1746 listed for external corrosion protection; and effective in preventing corrosion of the steel tank shell. EPA considers the tank jacket to be a non-corrosive dielectric material that: is constructed as secondary containment or jacketed around a steel tank; has sufficient durability to prevent external corrosion of the steel tank shell during a tank's life; and prevents a regulated substance released from the primary steel tank wall from reaching the environment.

Non-Corrodible Piping

The 1988 UST regulation allowed fiberglass-reinforced plastic piping, but did not specifically include other non-corrodible piping options such as flexible plastic piping. Both fiberglass and flexible plastic piping are listed under the UL 971 standard, *Nonmetallic Underground Piping for Flammable Liquids*. Non-corrodible piping not made of fiberglass-reinforced plastic (in particular, flexible plastic piping) was installed at UST sites beginning in the 1990s and has evolved over the past 20 years. Flexible plastic piping is made of various non-corrodible materials, such as polyethylene and polyurethane. EPA estimates at least 13 percent

of regulated piping currently installed is made of non-corrodible materials that are not fiberglass-reinforced plastic.[116] This final UST regulation revises fiberglass-reinforced piping to be non-corrodible piping and allows UST owners and operators to install other types of non-corrodible piping, such as flexible plastic, without requiring implementing agencies to make a determination on the suitability of those materials.

Release Detection Technologies

The 1988 UST regulation allowed UST owners and operators to use other methods that meet release detection performance criteria listed at § 280.43(h). Although continuous in-tank leak detection (CITLD) and SIR were allowed under § 280.43(h), EPA is including both by name and providing specific performance criteria in this final UST regulation for the reasons described below.

CITLD

The 1988 UST regulation allowed ATG systems as a recognized method of release detection. However, ATG systems were generally listed with performance requirements consistent with performing a static test. ATG systems rely on system down time and the absence of product delivery or dispensing activities to perform release detection. In static testing mode, an ATG system analyzes product level and determines whether a leak is present during that

[116] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

down time. UST owners and operators also use ATG systems as a means of continually monitoring tanks for potential releases. CITLD has evolved as a reliable means of providing release detection equivalent to other methods specified in § 280.41. Within this category of methods, this final UST regulation allows continuous in-tank methods where the system incrementally gathers measurements to determine a tank's leak status within the 30-day monitoring period.

One commenter asked EPA to further clarify the term CITLD. That commenter said EPA presented language in the 2011 proposed UST regulation that confused CITLD, continuous statistical leak detection (CSLD), and SIR because each is a statistically based release detection method. EPA agrees with the commenter and is clarifying use of the term CITLD, which encompasses all statistically based methods where the system incrementally gathers measurements on an uninterrupted or nearly uninterrupted basis to determine a tank's leak status. Currently, there are two major groups that fit into this category: CSLD (also referred to as continuous automatic tank gauging methods) and continual reconciliation. Both groups typically use sensors permanently installed in the tank to obtain inventory measurements. They are combined with a microprocessor in the ATG system or other control console that processes the data. Continual reconciliation methods are further distinguished by their connection to dispensing meters that allow for automatic recording and use of dispensing data in analyzing tanks' leak status. SIR, which we describe below, is not a continually operating method that fits into the CITLD category.

This final UST regulation formally recognizes CITLD as a release detection method in § 280.43(d). Per § 280.41, a conclusive pass or fail result must be obtained within the 30-day monitoring period. All monitoring records must be maintained according to § 280.45. Another

method of release detection is required in the event of an inconclusive result. For example, in the event of an inconclusive result, UST owners and operators may perform an in-tank static test using an ATG system or use another method of release detection.

SIR

This final UST regulation adds SIR as a release detection method and provides performance criteria for its use. SIR must:

- Report a quantitative result with a calculated leak rate;
- Be capable of detecting a leak rate of at least 0.2 gallon per hour or a release of 150 gallons within a 30-day period with a probability of detection of not less than 0.95 and a probability of false alarm of no greater than 0.05; and
- Use a threshold that does not exceed one-half the minimum detectable leak rate.

A quantitative result with a calculated leak rate is necessary to effectively perform release detection using SIR. Some SIR methods are qualitative based methods that simply provide a result of pass or fail without any additional information for UST owners and operators to gauge the validity of reported results. Based on information in the NWGLDE list,[117] approximately 85 percent of SIR methods listed are quantitative-based methods. Many state UST implementing agencies already only allow quantitative methods. This final UST regulation only allows quantitative SIR as an option for meeting the release detection requirement.

Consistent with the performance criteria described in the other methods option for release detection, this final UST regulation maintains the performance standards of a 0.2 gallon per hour

[117] National Work Group On Leak Detection Evaluations' *List Of Leak Detection Evaluations For Storage Tank Systems*: http://www.nwglde.org/

release or a release of 150 gallons within a 30-day period with a probability of detection of 0.95 and a probability of false alarm of 0.05. The 2011 proposed UST regulation did not include the additional standard of 150 gallons within a 30-day period for SIR. EPA agrees with the commenter who noted the importance of the 150 gallons criteria if SIR methods are used for monitoring piping for release detection; as a result, we are retaining this performance standard for SIR in the final UST regulation because EPA and some other implementing agencies allow UST system owners and operators to use SIR for piping release detection.

Like other release detection methods, SIR must be capable of detecting a release of 0.2 gallon per hour or less with a probability of detection (Pd) of at least 0.95 and probability of false alarm (Pfa) of no more than 0.05. In a normal probability distribution, SIR data typically analyzed through the calculation of the reportable values of minimum detectable leak rate (MDL) and the leak declaration threshold (T) are related as follows:

- MDL is always greater than T
- Pd = (1-Pfa), then MDL = 2 times T (i.e., T = ½ MDL)

Any analysis of data indicating a threshold value greater than one-half minimum detectable leak rate should be investigated as a suspected release.

One commenter asked EPA to further clarify SIR. The commenter said EPA presented language in the 2011 proposed UST regulation that confused statistically based release detection methods currently in use. EPA agrees and is modifying the description of SIR in this final UST regulation at § 280.43(h) to narrow the focus of statistically based methods, which fit under this section. SIR encompasses only those statistically based methods where inventory data is gathered over a period and typically provided to a vendor who analyzes the data to determine the leak status of the tank. These methods do not include systems that incrementally gather

measurements on an uninterrupted or nearly uninterrupted basis to determine the tank's leak status described in § 280.43(d) under continuous in tank leak detection.

This final UST regulation addresses these issues associated with SIR:

- SIR is not the same as inventory control
    - Historically, users, vendors, and regulators have incorrectly associated SIR with inventory control in § 280.43(a). SIR is more sophisticated than inventory control and not subject to the same requirement to combine it with tank tightness testing and limit its use to 10 years. Section 280.50(c)(3) allows owners and operators to use a second month of inventory control data to confirm initial possible failure results. However, this allowance does not apply to SIR. Therefore, any failed SIR result must be investigated as a suspected release. Also, in the event of an inconclusive result, UST owners and operators must use another method of release detection to determine the leak status of the tank.
- Results for release detection, including SIR, are required within the 30-day monitoring period
    - EPA considered including a requirement in the final UST regulation that UST owners and operators obtain a record of SIR results within 30 days. However, this requirement is already covered in the release detection requirements. As § 280.41(a)(1) states, "Tanks…must be monitored for releases at least every 30 days using one of the methods listed in § 280.43(d) through (i)…." In this final UST regulation, EPA is adding a subsection to formally recognize SIR. A definitive result of pass or fail that identifies the tank's leak status is required within the 30-day monitoring period for all release detection methods, including

SIR.

- Owners and operators must use another method of release detection if SIR results are inconclusive
    - For years, implementing agencies have been concerned about inconclusive results when using SIR for release detection. In 1993, EPA issued a policy regarding inconclusive SIR results,[118] which says all methods used to meet release detection requirements in § 280.41 must obtain a conclusive result of pass or fail within the 30-day monitoring period. All monitoring records must be maintained according to § 280.45. For SIR, this means UST owners and operators must obtain a report determining release status within the 30-day monitoring period. Another method of release detection is required when results are inconclusive; prior to sufficient data gathered to generate an initial report at startup; or when a report is not available for any month of monitoring. Owners and operators have not performed release detection until the release status of the UST system has been conclusively determined.
- Initial SIR report at startup
    - SIR methods need to gather data over a period in order to determine whether the tank is leaking. In some cases, implementing agencies have addressed significant lag times between when data is collected and when a tank status determination is available to owners and operators. NWGLDE's list of third-party evaluated methods indicates the data collection period required for SIR methods ranges from 15 to 90 days. However, most methods require between 23 and 30 days to

[118] UST Technical Compendium, question and answer number 21: http://epa.gov/oust/compend/rd.htm

gather sufficient measurements that provide an accurate result. Any method that goes beyond a 30-day monitoring period is inconsistent with and does not meet the release detection requirement. It is imperative that UST owners and operators determine the status of their tanks within the established monitoring period to avoid increased risk of releases. Therefore, owners and operators must use another release detection method at least once every 30 days until a SIR result is obtained. After that, owners and operators must have a SIR result at least once every 30 days.

- Meeting the 30-day monitoring requirement
    - EPA received several comments regarding the lack of timeliness associated with determining whether a leak exists when using SIR. In many instances, monitoring results are not produced until the next monitoring period or well beyond. These commenters also provided several suggestions for EPA to address the lag time between UST owners and operators collecting leak detection data and receiving late reporting on the leak status of the tank. EPA reiterates its established regulatory requirement that tanks must be monitored for releases at least once every 30 days.
    - Commenters provided other options for how owners and operators can meet the release detection requirement. One possible option is for EPA to require owners and operators perform a SIR analysis every 15 days using the last 30 days of data. This option results in a more frequent analysis of the UST system's leak status. EPA agrees this option would allow owners and operators to meet the release detection requirement. Another option suggested was for EPA to add a

requirement that SIR results must be returned to owners within seven days of the end of the data collection period; other commenters indicated various other times. EPA disagrees with this option because it would not meet the requirement to conduct release detection at least once every 30 days. Providing additional time for one method to determine whether a leak has occurred would be both unfair to UST system owners and operators using other release detection methods, as well as result in decreased environmental protection. To meet the release detection requirement for SIR, owners and operators could conduct a more frequent analysis, as one commenter suggested, or send data more expeditiously by electronic means. EPA is retaining the 30-day release detection requirement, which allows owners and operators to use whatever method they choose, as long as the method meets performance standards. UST system owners and operators can discuss changing their methods or data collection procedures with their SIR vendors in order to meet EPA's release detection requirement.

Interstitial Monitoring

The 2011 proposed UST regulation included three methods of continuous interstitial monitoring – vacuum, pressure, and liquid-filled methods – in § 280.43(g). EPA proposed these methods in conjunction with the periodic secondary containment testing requirement. Based on comments, EPA removed references to continuous interstitial monitoring in this final UST regulation. Because continuous interstitial monitoring is not discussed in this final UST regulation, EPA does not include language pertaining to continuous vacuum, pressure, or liquid-

filled methods of interstitial monitoring in § 280.43(g). This does not impact release detection methods allowed under § 280.43(g).

2. Updates to Codes of Practice Listed in the UST Regulation

This final UST regulation updates the codes of practice (also called standards or recommended practices) listed in the 1988 UST regulation to reflect new codes, changes to code names, and new nationally recognized associations and independent testing laboratories. The 1988 UST regulation relied on codes of practice developed by nationally recognized associations or independent testing laboratories to implement many of the requirements. EPA will continue to rely on codes of practice in this final UST regulation.

EPA reviewed information from more than 25 code making groups on more than 200 codes of practice, which have been developed or revised since the 1988 UST regulation.[119] As a result, EPA is:

- Updating titles and designations of existing codes of practice;
- Adding applicable codes of practice developed after the 1988 UST regulation was finalized;
- Moving codes of practice that were misplaced in the 1988 UST regulation; and
- Removing codes of practice that:
    - Are out of date, no longer available, withdrawn, or rescinded;
    - No longer provide any information appropriate to or relevant to the final UST

[119] E^2, Incorporated, memoranda and analyses submitted under Contract EP-W-05-018, U.S. Environmental Protection Agency. *Underground Storage Tanks/Leaking Underground Storage Tanks Analytical And Technical Support*. These supporting materials are located in the docket EPA-HQ-UST-2011-0301

regulation where it was referenced; or

- Are no longer needed.

For example, EPA listed the Association for Composite Tanks ACT-100 tank standard in § 280.20(a)(3) of the 1988 UST regulation as a code of practice for meeting the clad tank requirement. EPA is removing this code of practice from this final UST regulation because both the association and code of practice no longer exist.

In several cases, EPA is moving a code of practice from one section of the final UST regulation to another. For example, EPA is moving Steel Tank Institute Standard F841, *Standard for Dual Wall Underground Steel Storage Tanks* from § 280.43(g) - interstitial monitoring to § 280.20(a)(2), which covers steel tanks. EPA thinks it makes more sense for this to be included under the UST design and construction standards, rather than as a release detection standard. EPA used similar rationale when relocating other codes of practice in this final UST regulation.

As in the preamble to the 1988 UST regulation, this final UST regulation does not require use of a specific version or edition of any code. The consensus codes are frequently revised and updated. EPA recognizes that requiring use of the most recent edition of a code of practice would cause undue confusion in the regulated community. For example, owners and operators install UST systems according to codes of practice current at the time of installation, but may not have equipment in the ground that meets codes that are current 10 years later. EPA concludes that the industry codes in effect at the date of publication of this final UST regulation are protective of human health and the environment. Using future editions of codes instead of editions now in effect is not required, but is encouraged; updated codes will probably provide for newer, more effective technologies and practices. Using past codes, which have been replaced

by new editions prior to the effective date of this final UST regulation, is not allowed because some past recommended industry practices may not represent current codes of practice or may not adequately cover the regulatory requirement.

Consistent with the preamble to the 1988 UST regulation, this final UST regulation interprets the term nationally recognized organization to mean a technical or professional organization that has issued standards formed by the consensus of its members. The organization should consider all relevant viewpoints and interests, including those of consumers and future or existing potential industry participants. The resulting standards should be widely accepted and based on a broad range of technical information, and performance criteria should be central elements of the resulting standards. EPA regards the following organizations, whose codes of practice are listed in this final UST regulation, as examples of nationally recognized organizations:

American Petroleum Institute (API)

American Society for Testing and Materials (ASTM)

Fiberglass Tank and Pipe Institute (FTPI)

National Association of Corrosion Engineers (NACE)

National Fire Protection Association (NFPA)

National Leak Prevention Association (NLPA)

Petroleum Equipment Institute (PEI)

Steel Tank Institute (STI)

Underwriters Laboratory (UL)

EPA received broad support for updating the codes of practice listed in the final UST regulation. Several commenters pointed out errors to titles or designations in the 2011 proposed

UST regulation. This final UST regulation corrects these errors.

EPA received comments on the 2011 proposed UST regulation asking that we add or remove several codes of practice. EPA reviewed PEI's recommended practice for testing and verification of spill, overfill, leak detection, and secondary containment equipment (RP 1200), and in this final UST regulation is including it in areas where testing or inspecting UST equipment is required. EPA also reviewed and is including PEI's recommended practice for the inspection and maintenance of UST systems (RP 900) in the walkthrough inspections portion of this final UST regulation. EPA is not including the Canadian code for installing fiber reinforced plastic linings (ULC/ORD-C58.4-05), because this final UST regulation no longer allows owners and operators to install internal linings to meet the corrosion protection upgrade. Owners may continue using internal linings for other reasons such as compatibility or secondary containment; but EPA determined there are no appropriate areas in this final UST regulation to list lining codes of practice for those purposes. Also, EPA is not including PEI's recommended practice for the inspection and maintenance of motor fuel dispensing equipment (RP 500), because it is a standard for inspecting motor fuel dispensing equipment and Subtitle I of the SWDA does not give EPA the authority to regulate aboveground equipment such as motor fuel dispensing equipment. Finally, EPA is not including STI's storage tank maintenance standard (R-111) as an option for periodic walkthrough inspections because the content of the 2011 version of this code of practice only focused on water and contaminants in the tank along with compatibility. Except for a monthly inspection checklist, this code of practice does not describe how to conduct a periodic walkthrough inspection. If STI changes this code of practice, implementing agencies may determine whether the newer version is adequate for meeting the periodic walkthrough inspection requirement in this final UST regulation.

In the 2011 proposed UST regulation, EPA asked for input on whether the requirement to follow codes of practice and manufacturer's instructions under the installation requirements in § 280.20(d) should apply to just tanks and piping (as stated in the 1988 UST regulation) or apply to the UST system as a whole. Both the 1988 UST regulation and this final UST regulation define UST system as the underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any. Commenters strongly supported requiring installation of the UST system, rather than just tanks and piping, according to a code of practice developed by a nationally recognized association or independent testing laboratory and according to manufacturer's instructions. For these reasons, this final UST regulation replaces tanks and piping with UST system in § 280.20(d).

3. Updates to Remove Old Upgrade and Implementation Deadlines

This final UST regulation removes references to the 1998 deadline and old phase in schedules, while continuing to allow testing of corrosion protection and release detection. These changes acknowledge that the 1998 deadline for upgrading UST systems with release prevention and the 1990s release detection and financial responsibility deadlines passed more than a decade ago. In addition, as of 2010 implementing agencies have inspected all regulated UST systems at least once for compliance with release detection, release prevention, and financial responsibility requirements.

EPA will no longer allow owners and operators to upgrade UST systems if they never met the 1998 upgrade requirements, unless the implementing agency determines the UST system is acceptable to upgrade. Owners and operators must permanently close non-upgraded UST

systems according to the closure requirements in subpart G. Non-upgraded UST systems are older and have been in the ground for more than two decades. In addition, metal USTs and piping without corrosion protection pose a significant risk to human health and the environment, because unprotected metal in contact with soil corrodes. EPA is allowing implementing agencies to make case-by-case determinations on when to allow upgrades. EPA does not expect implementing agencies to allow continued use of tanks or piping not upgraded with corrosion protection. However, some implementing agencies may decide to allow owners and operators of UST systems with corrosion protection, but without spill or overfill prevention, to add spill or overfill prevention instead of requiring permanent closure.

EPA will continue to allow UST systems with field-constructed tanks and airport hydrant systems to be upgraded with spill, overfill, and corrosion protection under subpart K of the UST regulation. See section C-2 for additional information on upgrading these UST systems.

To meet the release detection requirement, § 280.41 of the 1988 UST regulation allowed owners and operators of USTs not upgraded with corrosion protection to use a combination of monthly inventory control with annual tank tightness testing until December 22, 1998. Since owners and operators no longer have the option to use inventory control and annual tightness testing, EPA is removing this option from this final UST regulation.

In response to comments received, EPA is removing the definition of petroleum marketing firm from subpart H of this final UST regulation. EPA only used the term petroleum marketing firm in the compliance dates section as it related to when these firms needed to meet the financial responsibility requirements. Since the compliance dates for conventional UST systems have passed more than a decade ago, the term no longer needs to be defined.

4. Editorial Corrections and Technical Amendments

This final UST regulation includes editorial corrections and technical amendments to the 1988 UST regulation. Editorial corrections include: correcting misspellings; capitalizing words; removing unused acronyms; using conventional number formatting; and appropriately referring to parts, subparts, sections, and paragraphs. In addition, this final UST regulation adds technical amendments, which include updating the final UST regulation to incorporate statutory changes that occurred since the 1988 UST regulation was promulgated and clarifying longstanding Agency interpretations and policies. EPA is making the following technical amendments in this final UST regulation:

- § 280.10(c)(4) – EPA is revising the Nuclear Regulatory Commission citation to be consistent with the Spill Prevention Control and Countermeasures requirements in 40 CFR part 112. This final UST regulation partially excludes emergency generator systems at nuclear power generation facilities licensed by the Nuclear Regulatory Commission that are subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including but not limited to 10 CFR part 50. EPA originally proposed only deleting appendix A from the regulatory citation. However, EPA agrees with commenters that using language consistent with the Spill Prevention Control and Countermeasures requirements in 40 CFR part 112 provides clarity and consistency for owners and operators of emergency generator UST systems at nuclear power generation facilities.
- § 280.12 – EPA is revising exclusion (ii) of the definition of UST to incorporate a revision in section 9001 of the Solid Waste Disposal Act.

- This final UST regulation adds a technical amendment to § 280.43(b), which codifies longstanding Agency policy adding additional flexibility for using manual tank gauging. This change updates UST capacity allowances and testing durations when using manual tank gauging. Since 1990, EPA allowed these deviations from the 1988 UST regulation through policy and included them in outreach publications.
- The 2011 proposed UST regulation removed the requirement for inventory control for the automatic tank gauging release detection method in § 280.43(d) because some interpreted the language as requiring both inventory control and automatic tank gauging. However, EPA agrees with commenters who indicated the language is necessary to ensure automatic tank gauging equipment meets inventory control performance standards in § 280.43(a). More specifically, EPA is keeping the regulatory language to ensure owners and operators continue to measure for water as described in the inventory control requirement. This final UST regulation departs from the proposal and retains language established in the 1988 UST regulation that automatic tank gauging equipment also must meet the inventory control requirements. This final UST regulation does not require owners and operators to perform inventory control in addition to automatic tank gauging.
- This final UST regulation expressly states which new operation and maintenance requirements owners and operators do not have to meet for UST systems in temporary closure. Owners and operators of temporarily closed UST systems that are empty do not have to perform the following periodic release detection operation and maintenance testing and inspections in subparts C and D: 30 day release detection checks, annual sump checks, and annual hand-held release detection checks described in the walkthrough inspection section (see section B-1); testing of containment sumps used for

interstitial monitoring described in the secondary containment testing section (see section B-4); and testing of release detection equipment described in the release detection equipment testing section (see section B-5). These requirements are unnecessary as long as the temporarily closed UST system is empty because release detection is not required in the first place. In addition, owners and operators of any UST system in temporary closure are not required to conduct the following periodic operation and maintenance testing and inspections for spill prevention equipment and overfill prevention equipment in subpart C: spill prevention equipment testing (see section B-2); overfill prevention equipment inspections (see section B-3); or spill prevention equipment checks described in walkthrough inspections (see section B-1). Spill and overfill testing or inspections are not required for UST systems in temporary closure because those systems are not receiving deliveries of regulated substances. Finally, as a conforming amendment, this final UST regulation adds subpart K to the release detection citation because new release detection requirements for field-constructed tanks and airport hydrant systems are included in that subpart.

- This final UST regulation amends the definition of the term accidental release in § 280.92 so it matches the definition described in the preamble to the 1988 UST regulation for the financial responsibility requirements (53 FR 43334). EPA intended the definition in the preamble to be included in the 1988 UST regulation, but failed to include the concept of releases as a result of operating the UST. Through this amendment, EPA is clarifying that owners and operators are required to have financial responsibility for releases arising from operating USTs (including releases due to filling USTs and releases occurring at dispensers).

- § 280.94(a)(1) – EPA proposed to include the local government option citations in this section. However, those options are not included in this final UST regulation because they are already included in § 280.94(a)(2).
- § 280.97(b)(1) and (2) – EPA added the local government options as part of the reference since those options are also viable financial responsibility mechanisms.
- To make the local government bond rating test consistent with the requirements of the financial test in § 280.94, this final UST regulation adds a new subsection to § 280.104.
- To ensure the definition of UST technical standards in subpart I, *Lender Liability*, includes all of the preventative and operating requirements in this final UST regulation, EPA revised the definition to include subparts J and K as part of the preventative and operating requirements under 40 CFR part 280.
- To add clarity about the statement for shipping tickets and invoices in appendix III, this final UST regulation revises the appendix.
- Finally, the final UST regulation revises sections that use the terms operating life or properly closed to be permanently closed or when a change-in-service occurs; this amendment will clearly indicate when the regulated operating life of an UST system ends. This final UST regulation does not define an operating life or proper closure. Rather, it describes permanent closure and change-in-service.

F. *Alternative Options EPA Considered*

In developing this final UST regulation (hereafter the Selected Option), EPA considered and evaluated variations of a subset of the regulatory requirements using two alternative options

(hereafter Option 1 and Option 2). The table below highlights differences between the Selected Option and Options 1 and 2. Some of the regulatory requirements do not vary across the options (for example, notification of ownership changes is required in all three). As a result, regulatory changes discussed earlier in the preamble, but not listed here, mean those changes are in effect in all three options. Overall, Options 1 and 2 consist of regulatory changes that are more and less stringent, respectively, than those of the Selected Option.

Comparison of Selected Option and Options 1 and 2

Regulatory Requirement	Options		
	Selected	**1**	**2**
Walkthrough inspections	30 days	30 days (per 2011 proposed UST regulation)*	Quarterly
Overfill prevention equipment inspections	3 years	Annual	Not required
Spill prevention equipment tests	3 years	Annual	3 years
Containment sump tests	3 years	Annual	Not required
Elimination of flow restrictors in vent lines for all new tanks and when overfill devices are replaced	Required	Required	No change from 1988 UST regulation
Operability checks for release detection equipment	Annual (plus annual check of sumps)	Annual (per 2011 proposed UST regulation)*	Annual (plus annual check of sumps)
Groundwater and vapor monitoring for release detection	Continue to allow with site assessment	5-year phase out (per 2011 proposed UST regulation)*	No change from 1988 UST regulation
Remove release detection deferral for emergency generator tanks	Required	Required (per 2011 proposed UST regulation)*	Required
Requirements for demonstrating compatibility for fuels containing > E10 and > B20	Required	Required (per 2011 proposed UST regulation)*	No change from 1988 UST regulation
Remove deferrals for airport hydrant fuel distribution systems and UST systems with field-constructed tanks	Regulate under alternative release detection requirements	Require airport hydrant systems and field-constructed tanks notify implementing agency and report releases (with no other new requirements)	Maintain deferral

[*] In the 2011 proposed UST regulation, these regulatory changes generally consisted of more or stricter requirements than what is in the final UST regulation. For example, the 30-day walkthrough inspections in the 2011 proposed UST regulation included monthly check of sumps. Please see the 2011 proposed UST regulation for details.

Below we explain Options 1 and 2, as well as our rationale for each. (Note that EPA conducted a regulatory impact analysis for all three options. The results are discussed in the RIA document titled *Assessment of the Potential Costs, Benefits, and Other Impacts of the Final Revisions to EPA's Underground Storage Tank Regulations,* which is available in the docket for this action.)

EPA's Rationale for Option 1

EPA considered keeping walkthrough inspections as described in the 2011 proposed UST regulation. However, based on concerns from commenters regarding the proposed walkthrough inspection requirements, EPA decided to revise the components of the walkthrough inspection. See section B-1 for details regarding this final UST regulation on walkthrough inspections.

EPA also considered requiring annual inspections of overfill prevention equipment, annual spill prevention equipment tests, and annual containment sump testing. After reviewing comments, considering the benefits of establishing one consistent implementation time frame across as many regulatory requirements as possible, as well as assessing the cost of requiring annual tests and inspections, EPA is requiring owners and operators inspect overfill prevention equipment and test spill prevention equipment and containment sumps once every three years. This balances the benefits of ensuring properly functioning equipment with the potential administrative burden and costs imposed on owners and operators.

When considering operability checks for release detection equipment, EPA examined the possibility of keeping the operability checks as described in the 2011 proposed UST regulation. However, based on comments, EPA decided to revise some components of the operability checks. This resulted in allowing owners and operators to perform some release detection checks on an annual basis instead of every 30 days. See section B-5 for details regarding release detection equipment testing.

EPA also considered maintaining the 2011 proposed option of a five year phase out of groundwater and vapor monitoring as permissible release detection methods. Based on concerns from states where groundwater and vapor monitoring are used frequently by owners and operators, EPA is retaining groundwater and vapor monitoring as long as owners and operators demonstrate proper installation and performance through a site assessment that must be maintained as long as the methods are used. See section D-6 for details regarding groundwater and vapor monitoring.

EPA also considered maintaining its 2011 proposed requirements for release detection of emergency generator tanks and for demonstrating compatibility. However, as discussed in earlier sections (C-1 for emergency generator tanks and D-4 for compatibility), EPA is revising these requirements in response to comments. For emergency generator tanks, we are revising the implementation time frame for consistency with other implementation dates. For compatibility, EPA is removing the recordkeeping requirement for new installations to make it easier for owners and operators to be in compliance. EPA is also adding a list of equipment that must demonstrate compatibility with storing ethanol blends greater than 10 percent or biodiesel blends greater than 20 percent, or any other regulated substance identified by the implementing agency.

This will help owners and operators understand which UST equipment must be demonstrated to be compatible.

Lastly, EPA considered requiring owners and operators of airport hydrants systems and field-constructed tanks submit a one-time notice of existence in addition to reporting confirmed releases to the implementing agency. Owners and operators of these systems would not be subject to any additional regulatory requirements under Option 1. After weighing the availability of release detection options for these systems, the applicability of other requirements in this final UST regulation, and the potential human health and environmental impact of releases from these systems, EPA is fully regulating these systems. See C-2 for EPA's rationale for regulating airport hydrant systems and field-constructed tanks.

EPA's Rationale for Option 2

In comparing costs with benefits of the final regulatory changes, EPA weighed different frequencies for walkthrough inspections and periodic equipment inspections or tests. EPA assessed quarterly walkthrough inspections, and not requiring overfill prevention equipment inspections and containment sump testing as ways to reduce potential cost impacts on owners and operators. Compared to the 30-day requirement, quarterly walkthrough inspections would reduce costs to owners and operators. However, EPA thinks a period less frequent than 30 days for walkthrough inspections would considerably reduce benefits. High operator turnover and the frequency of deliveries both contribute to the need for 30-day walkthrough inspections. With that in mind, today EPA is requiring 30-day walkthrough inspections so owners and operators

can consistently and routinely verify proper spill prevention and release detection performance. This will ensure problems are detected before a release occurs.

EPA also considered not requiring overfill prevention equipment inspections and containment sump testing. However, as explained in sections B-3, Overfill Prevention Equipment Inspections and B-4, Secondary Containment Tests, tank overfills and containment sump areas account for a significant amount of releases from UST systems. As a result, EPA is requiring overfill prevention equipment inspections and containment sump testing (for containment sumps used for interstitial monitoring) once every three years. Overfill prevention equipment inspections will ensure overfill prevention equipment is operating properly. Similarly, containment sump testing will ensure that containment sumps used for interstitial monitoring will be liquid tight.

To reduce total compliance costs of this final UST regulation for owners and operators, EPA considered allowing continued use of flow restrictors in vent lines (that is, ball float valves) as an acceptable form of overfill prevention equipment. After considering public comments, EPA maintains its position that vent line flow restrictors present problems for operability and safety reasons. As described in section D-1, EPA is eliminating ball float valves as an overfill prevention equipment option for all new tanks and when overfill prevention equipment is replaced in existing tanks.

EPA considered maintaining the existing requirements for groundwater and vapor monitoring, in particular retaining the two as permissible release detection methods with no changes to the 1988 UST regulation. However, given the numerous concerns that have arisen over the years regarding these two release detection methods, such as misapplications and improper designs of monitoring wells, EPA is retaining these two release detection methods only

if owners and operators demonstrate proper installation and performance through a site assessment. See section D-6 for details regarding groundwater and vapor monitoring.

EPA also considered only retaining the current requirement for owners and operators to use UST systems made of or lined with materials that are compatible with the substance stored in the UST system. However, EPA understands that the chemical and physical properties of ethanol and biodiesel can be more degrading to certain UST materials than petroleum alone. As the use of ethanol- and biodiesel-blended fuels increases, EPA is concerned that not all UST system equipment or components are compatible with these fuels. Therefore, EPA is requiring owners and operators demonstrate compatibility of certain UST system components when storing ethanol blends greater than 10 percent and biodiesel blends greater than 20 percent. Owners and operators can demonstrate compatibility of required components by using one of the three options described in this final UST regulation. See section D-4 for details regarding compatibility.

Finally, EPA considered maintaining deferrals for airport hydrant systems and field-constructed tanks. However, as explained above, after weighing the availability of release detection options for these systems, the applicability of the other requirements in this final UST regulation, and the potential human health and environmental impact of releases from these systems, EPA is fully regulating these systems. See C-2 for EPA's rationale for regulating airport hydrant systems and field-constructed tanks.

V. Updates to State Program Approval Requirements

EPA is making changes to the 1988 SPA regulation (40 CFR part 281) to make it consistent with certain Energy Policy Act requirements and certain revisions to the 1988 UST regulation (40 CFR part 280). Commenters generally supported EPA changing portions of the 1988 SPA regulation and making it consistent with revisions to the 1988 UST regulation. Commenters supported EPA keeping the general format of the 1988 SPA regulation and not making the final SPA regulation as explicit or prescriptive as this final UST regulation.

EPA is making these substantive changes to the 1988 SPA regulation.

- § 281.12(b) – adding definitional exceptions for several Energy Policy Act definitions
- §§ 281.30(a), 281.33(c)(2), and 281.33(d)(3) – require secondary containment for new or replaced tanks and piping and under-dispenser containment for new motor fuel dispenser systems for UST systems located within 1,000 feet of a potable drinking water well or community water system, unless a state requires manufacturer and installer financial responsibility according to section 9003(i)(2) of the Solid Waste Disposal Act
- §§ 281.30(a)(1) and 281.33(d)(3) – exclude safe suction piping, airport hydrant system piping, and field-constructed tank piping from being required to meet the secondary containment and interstitial monitoring requirements
- § 281.30(b) – eliminate flow restrictors for new or replaced overfill prevention
- § 281.30(c) – add notification for ownership changes
- §§ 281.31 and 281.33(b) – delete upgrading requirements and eliminate phase-in schedule; add phase-in schedule for airport hydrant fuel distribution systems and UST systems with field-constructed tanks
- § 281.32(c) – add requirement for states to include provisions for demonstrating compatibility with new and innovative regulated substances or other regulated substances

identified by implementing agencies or include other provisions determined by the implementing agency to be no less protective of human health and the environment than the provisions for demonstrating compatibility

- §§ 281.32(e) and (f) and 281.33(a)(3) – add periodic testing or inspection of spill and overfill prevention equipment, containment sumps used for interstitial monitoring of piping, and mechanical and electronic release detection components; and operation and maintenance walkthrough inspections, as well as maintaining associated records
- § 281.33(c) – limit use of monthly inventory control in combination with tank tightness testing conducted every five years for the first ten years after the tank is installed or upgraded, if the tank was installed prior to a state receiving SPA
- § 281.33(e) – require hazardous substance USTs to only use secondary containment with interstitial monitoring
- § 281.34(a)(1) – add interstitial space may have been compromised to suspected releases
- § 281.37 – eliminate phase-in requirement for financial responsibility
- § 281.39 – require operator training according to § 9010 of the Solid Waste Disposal Act
- § 281.41(a)(4) – add authority to prohibit deliveries

EPA is making these technical changes to the SPA regulation.

- § 281.10 – change subpart to part
- §§ 281.11(c), 281.20(d), 281.21(a)(2), 281.23, 281.50(a), and formerly § 281.51 – eliminate interim approval
- § 281.12(a)(2) – change Indian lands to Indian country
- Formerly § 281.32(e) – eliminate requirement to maintain upgrade records

- Formerly § 281.38 – eliminate reserved section for financial responsibility for USTs containing hazardous substances
- Move § 281.39 to § 281.38 – Lender Liability
- §§ 281.50(e) and 281.51(c)(1) – clarify how to provide public notice to attract statewide attention
- § 281.51, formerly § 281.52 – add requirement for approved states to submit a revised application within three years of 40 CFR part 281 changes that require a program revision
- § 281.61 – move § 281.60(b) to § 281.61(b)(2)

Background Information

The 1988 SPA regulation in 40 CFR part 281 sets criteria state UST programs must meet to receive EPA's approval to operate in lieu of the federal UST program. The 1988 SPA regulation sets performance criteria states must meet to be considered no less stringent than the federal UST regulation (hereafter 40 CFR part 280) and provides requirements for states to have adequate enforcement. It also details the components of a SPA application.

EPA is changing the 1988 SPA regulation and making it consistent with this final UST regulation. By doing so, EPA will require states to adopt requirements similar to the final UST regulation, in order to obtain or retain SPA. Commenters supported maintaining the general format of the 1988 SPA regulation and EPA is keeping that general format. We are not making this final SPA regulation as explicit or prescriptive as this final UST regulation. Finally, EPA is making technical corrections and adding a deadline for states to apply for revised state program approval.

Addressing Energy Policy Act Requirements and 40 CFR Part 280 Changes

How SPA Works

This final UST regulation primarily impacts the 1988 SPA regulation in 40 CFR part 281, subpart C – Criteria for No Less Stringent. As of 2014, 40 states, including the District of Columbia and Puerto Rico, have state program approval and state UST requirements apply in lieu of the federal requirements. To ensure these jurisdictions and any other states or territories obtaining SPA adopt these 40 CFR part 280 changes, EPA must update the 1988 SPA regulations in 40 CFR part 281, subpart C – Criteria for No Less Stringent. To continue providing states with flexibility and not disrupt current state programs, EPA is revising the 1988 SPA regulation to make it consistent with, but not identical to, the 40 CFR part 280 changes. Instead, EPA is making changes to the 1988 SPA regulation in a less prescriptive manner than the changes to 40 CFR part 280. Since 1988, this approach has proven a successful way to implement the UST program and provide environmental protection.

The 1988 SPA regulation developed no less stringent criteria in the form of objectives.[120] EPA is continuing this format so that, taken as a whole, state programs will be no less stringent than the federal requirements, even though state programs may deviate slightly from what is explicitly required in 40 CFR part 280. For example, § 281.30 covers the no less stringent requirement for new UST system design, construction, and installation; it corresponds to § 280.20 of this final UST regulation, but is much less explicit about requirements.

[120] 53 FR 37216, September 23, 1988.

According to § 281.30 and in order to receive SPA, a state must require all new UST systems "…[b]e designed, constructed, and installed in a manner that will prevent releases for their operating life due to manufacturing defects, structural failure, or corrosion…". In contrast, § 280.20 is much more explicit about how tank owners and operators ensure their tanks and piping prevent releases. It states what is required to prevent releases and provides codes of practice to comply. Although § 281.30 is less explicit, it nonetheless ensures owners and operators in approved states install UST systems that prevent releases and provides states flexibility in achieving that goal.

Goal Oriented Changes

EPA is making goal oriented changes to subpart C – Criteria for No Less Stringent. By the term goal oriented changes, EPA means changes in which states have some flexibility as to how they meet the goals of particular sections of the final SPA regulation. These changes reflect certain 40 CFR part 280 changes.

- § 281.30(c) – add notification for ownership changes
- §§ 281.31 and 281.33(b) – add a phase-in schedule for upgrading previously deferred airport hydrant fuel distribution systems and UST systems with field-constructed tanks
- § 281.32(c) – add requirement for states to include provisions for demonstrating compatibility with new and innovative regulated substances or other regulated substances identified by implementing agencies or include other provisions determined by the implementing agency to be no less protective of human health and the environment than the provisions for demonstrating compatibility

- §§ 281.32(e) and (f) and 281.33(a)(3) – add periodic testing or inspection of spill and overfill prevention equipment, containment sumps used for interstitial monitoring of piping, and mechanical and electronic release detection components; and operation and maintenance walkthrough inspections, as well as maintaining associated records

The ownership change notification in § 280.22 requires anyone who assumes ownership of an UST system to notify the implementing agency within 30 days of assuming ownership and specifies what notification must include. However, the SPA regulation change in § 281.30(c) is much less prescriptive and indicates that states require owners and operators to "…notify the implementing state agency within a reasonable time frame when assuming ownership of an UST system." This provides states some flexibility in complying, including allowing them to continue relying on an annual tank registration program to meet this requirement. This is a reasonable way to ensure states know who owns USTs in their jurisdictions. EPA does not have an annual UST registration program, so we specify a time frame in § 280.22 because we want to know who owns tanks in jurisdictions where we are the implementing agency.

EPA is requiring that previously deferred airport hydrant fuel distribution systems and UST systems with field-constructed tanks meet specific upgrade requirements in subpart K. This is one way that states can achieve compliance with § 281.31, which requires states ensure tanks are upgraded to prevent releases due to corrosion, spills, and overfills or be permanently closed. EPA concludes these more general requirements are sufficient for a state program to protect human health and the environment because they require UST systems to "…prevent releases for their operating life...." EPA thinks it is also adequate to upgrade previously deferred systems to this standard.

Additionally, EPA is requiring airport hydrant systems, field-constructed tanks, and emergency generator tanks be upgraded within three years of the effective date of the state requirements. For states which did not defer these systems or already had their requirements in place before the effective date of this final SPA regulation, the three year requirement does not apply. In the past, EPA experienced issues with requiring states to have a particular requirement by a certain date in order to receive SPA. States applying for SPA after a deadline passed often had difficulty implementing or obtaining a retroactive requirement. EPA understands that states may have given owners and operators of UST systems previously deferred by EPA different time periods than three years to initially meet their requirements.

In § 281.32(c), EPA is adding a requirement for states to include provisions for demonstrating compatibility with new and innovative regulated substances or other regulated substances identified by implementing agencies or include other provisions determined by the implementing agency to be no less protective of human health and the environment than the provisions for demonstrating compatibility. EPA is concerned about the compatibility of new and innovative fuels with the existing UST system infrastructure. We added to § 280.32 methods for demonstrating compatibility of UST systems with certain ethanol and biodiesel blends in response to this concern. State UST implementing agencies also need to ensure owners and operators only store regulated substances compatible with their UST systems. Requiring states have provisions in place for storing new and innovative regulated substances in order to receive SPA ensures states are taking appropriate steps to ensure compatibility of the UST system with a rapidly expanding spectrum of traditional and new and innovative fuels.

This final UST regulation adds various UST operation and maintenance requirements. In 40 CFR part 280, EPA is requiring specific frequencies and procedures for testing or inspecting spill and overfill prevention equipment, testing containment sumps used for interstitial

monitoring of piping, testing release detection equipment, and conducting operation and maintenance walkthrough inspections. According to § 281.32, states must require these tests or inspections in a manner and frequency that ensures proper functionality of equipment, includes proper operation and maintenance of the UST system, and prevents releases for the life of the equipment and UST system. EPA thinks this approach allows states that implement these requirements despite different frequencies or manners, to receive SPA, as long as their requirements sufficiently ensure properly functioning non-releasing UST systems. EPA is updating § 281.32(g) by adding these activities to the recordkeeping requirements of SPA.

Energy Policy Act Changes

In this final SPA regulation, EPA is addressing Energy Policy Act requirements more generally than in this final UST regulation; however, the Energy Policy Act requirements are slightly different than the goal oriented approach discussed above. The Energy Policy Act amends the Solid Waste Disposal Act and requires states, which receive federal Subtitle I money, to adopt operator training requirements, delivery prohibition, and additional measures to protect groundwater from contamination. In the additional measures to protect groundwater provision, states must require either secondary containment and interstitial monitoring for new or replaced tanks and piping within 1,000 feet of a potable drinking water well or community water system, *or* manufacturer and installer financial responsibility and installer certification. The secondary containment requirement includes under-dispenser containment on any new motor fuel dispenser system within 1,000 feet of a potable drinking water well or community water system.

EPA developed guidelines for states to implement the Energy Policy Act requirements; many states implemented the Energy Policy Act requirements according to these guidelines. In order to impose similar requirements in Indian country and in states that do not adopt Energy Policy Act requirements, EPA is adding secondary containment and operator training to these 40 CFR part 280 requirements. However, it is not EPA's intent to supersede programs states developed to meet Energy Policy Act requirements.

Several commenters had concerns about the Energy Policy Act provisions. Seven commenters wanted to ensure states only have to meet Energy Policy Act grant guidelines and do not have to change their regulations to mirror the 40 CFR part 280 requirements in order to obtain SPA. These commenters were also concerned that EPA requirements for secondary containment and operator training could be considered more stringent than state requirements that met the grant guidelines. EPA agrees that requiring states to alter newly implemented provisions could cause unnecessary work for states and UST owners. Therefore, this final SPA regulation explicitly addresses the secondary containment, manufacturer and installer financial responsibility and installer certification, delivery prohibition, and operator training requirements that appear in the Energy Policy Act. EPA agrees that it is not necessary for states already meeting these Energy Policy Act requirements to change their programs in order to receive or retain SPA. EPA was unable to incorporate a similar requirement in 40 CFR part 280, so states will need to obtain SPA in order to ensure there is no difference between state and federal requirements with respect to Energy Policy Act requirements.

EPA is adding definitional exceptions in § 281.12(b). This final SPA regulation allows states to use definitions associated with tank and piping secondary containment and operator training that are different than those in 40 CFR part 280 as long as those definitions are

consistent with definitions described in sections 9003 and 9010 of the Solid Waste Disposal Act. This change provides states with additional flexibility in defining key terms.

EPA is adding additional measures to protect groundwater and is adding operator training requirements in subpart C (§§ 281.22(d)(3), 281.30(a), 281.33(c)(2), and 281.39). Delivery prohibition is in subpart D – Adequate Enforcement of Compliance (§ 281.40(a)). Because delivery prohibition is an enforcement option, EPA is requiring states have authority to prohibit deliveries according to the Energy Policy Act and EPA's grant guidelines, rather than make this a no less stringent requirement.

EPA is not adding delivery prohibition to 40 CFR part 280 because delivery prohibition is primarily an enforcement option for implementing agencies; it is not a requirement for owners and operators. Because the Energy Policy Act gives EPA clear delivery prohibition enforcement authority, we do not need to add delivery prohibition to this final UST regulation. However, the only way to ensure states have that same authority is to require states implement delivery prohibition as a prerequisite for SPA, as required in § 281.40(a).

Specific Changes

EPA is making the changes listed below to subpart C – Criteria for No Less Stringent to reflect changes made in 40 CFR part 280. These changes ensure states adopt the changes made in 40 CFR part 280 and are able to receive SPA.

- §§ 281.30(a)(1) and 281.33(d)(3) – exclude safe suction piping, airport hydrant system piping, and field-constructed tank piping from being required to meet the secondary containment and interstitial monitoring requirements

- § 281.30(b) – eliminate flow restrictors for new or replaced overfill prevention
- § 281.31 – delete upgrading requirements
- § 281.33(c) – limit use of monthly inventory control in combination with tank tightness testing conducted every five years for the first ten years after the tank is installed or upgraded, if the tank was installed prior to a state receiving SPA
- § 281.33(e) – require hazardous substance USTs to only use secondary containment with interstitial monitoring
- § 281.34(a)(1) – add "…interstitial space may have been compromised…" to suspected releases
- § 281.37 – eliminate phase-in requirement for financial responsibility

In §§ 281.30(a)(1) and 281.33(d)(3) EPA is not requiring safe suction piping, airport hydrant system piping, and piping associated with field-constructed tanks greater than 50,000 gallons in capacity to meet the secondary containment and interstitial monitoring requirements. Suction piping that meets the requirements of § 281.33(d)(2)(ii) has characteristics that ensure little, if any, regulated substances will be released if a break occurs in the line. For additional information see section A-2, Secondary Containment. EPA is not requiring secondary containment for piping associated with field-constructed tanks greater than 50,000 gallons in capacity and airport hydrant system piping due to sloping and corrosion concerns. For additional information, see section C-2, Airport Hydrant Fuel Distribution Systems and UST Systems with Field-Constructed Tanks.

In § 281.30(b), EPA is requiring states, which receive SPA, not allow installation of flow restrictors (commonly referred to as ball floats) in vent lines for overfill prevention for new installations or when flow restrictors need to be replaced. The existing goal of § 281.30(b) is for

states to require that UST systems have equipment to prevent spills and overfills. In this final UST regulation, EPA maintains the overall goal to prevent spills and overfills; however, owners and operators can no longer install ball floats to achieve that goal.

The deadlines for upgrades and for owners and operators to obtain financial responsibility have passed. As a result, EPA is deleting the 1988 UST regulation deadlines in the final SPA regulation. In §§ 281.31 and 281.33(b), EPA is removing the option for UST upgrades, except for USTs deferred in the 1988 UST regulation. In § 281.37, we are eliminating the financial responsibility phase-in schedule. Please note EPA is allowing states to implement UST requirements, such as upgrades and operation and maintenance, after the deadlines in 40 CFR part 280. EPA is taking this action because experience has shown that some states had difficulties implementing a retroactive requirement when applying for SPA after a federal deadline has passed.

In § 281.33(c), EPA is allowing monthly inventory control in combination with tank tightness testing conducted every five years as a release detection method for the first ten years after a tank is installed or upgraded, only if a tank was installed prior to a state receiving SPA for the 1988 UST regulation. This reflects a change in 40 CFR part 280 and avoids another problem in the 1988 SPA regulation. First, EPA is eliminating this method for new installations. Second, EPA is tying the date for eliminating this method to the effective date of a state's regulations. EPA concludes it is better to tie deadlines in the final SPA regulation to the effective date of states' regulations, rather than dictate specific dates for all states. In the 2011 proposed SPA regulation, we tied the deadlines to the date a state submitted its SPA application or revised application. However, in this final SPA regulation, we realize tying the deadlines to the effective date of a state's regulations is clearer for state regulators as well as owners and operators.

Several commenters were concerned with how release detection requirements were expressed in 40 CFR part 281. One commenter was concerned that the term monthly in § 281.33(c)(1) is not as stringent as the 40 CFR part 280 requirement of completing release detection every 30 days. This commenter wanted EPA to amend the 40 CFR part 281 language so it matches the 30 day wording in 40 CFR part 280. EPA is maintaining the term monthly in 40 CFR part 281. EPA agrees there is variation between the 30 day time frame in 40 CFR part 280 and monthly in 40 CFR part 281. For states receiving SPA, the difference should result in a variation of only a few days, and therefore need not be changed. It is EPA's position that release detection monitoring should be conducted on a consistent and frequently occurring basis. EPA chose the 30 day period in 40 CFR part 280 to represent an average calendar month.

In this final SPA regulation, EPA is requiring states, which wish to receive SPA, no longer allow installation of non-secondarily contained hazardous substance UST systems. This is consistent with EPA's change in § 280.42(e); an equivalent and specific change in the final SPA regulation is the only way to ensure states adopt it. For consistency with changes in this final UST regulation and to ensure states wishing to receive SPA adopt this change, in § 281.34(a)(1), EPA is adding "…interstitial space may have been compromised…" to suspected release conditions.

One commenter expressed concern with the release detection language in § 280.41(b)(2)(ii), which indicates EPA intends to exempt from release detection requirements suction piping that meets the condition of paragraphs (b)(1)(ii)(A) through (E). However § 281.33(d)(3) indicates that in order to be considered no less stringent, states must require new or replaced piping use interstitial monitoring with secondary containment. EPA agrees with the commenter that we need to modify § 281.33(d)(3) to incorporate the concepts of §

280.41(b)(2)(ii). In the final SPA regulation, EPA is modifying § 281.33(d)(3) to indicate that the requirement is applicable to all pressurized piping and suction piping that does not meet standards in § 281.33(d)(2)(ii).

One commenter said that it may be very difficult to achieve compliance with release detection requirements for emergency power generator USTs within one year. This commenter suggested that EPA reword § 281.33(b)(3) to give owners at least three years from the effective date of the final SPA regulation. EPA agrees with the commenter and is extending the date of compliance for this requirement to three years as we are in this final UST regulation; this approach corresponds with EPA's goal of aligning dates of compliance to the extent possible.

Addressing SPA Revision Process

EPA is adding a requirement for approved states to submit a revised application within three years of final SPA regulation changes that require a program revision under § 281.51. Approved states are required to revise their programs and submit revised applications whenever the federal program changes or EPA's Administrator requests a revised application based on changes to a state's program. Given these significant changes, EPA thinks it is necessary to develop a time frame which will ensure approved states meet final SPA regulation changes in a reasonable time. EPA's language in § 281.51 is intended only to require a state program revision within three years if EPA makes changes that necessitate state program changes. For instance, these changes to subpart C – Criteria for No Less Stringent will require state program revision.

Commenters disagreed on the appropriate time frame for states to submit their SPA applications. Some said three years was appropriate, while others preferred a different time

frame. EPA maintains that three years is adequate for most states to re-apply for SPA. One commenter expressed concern about what will happen to a state's SPA status if it does not re-apply within the required time frame. While most states will be able to meet the three-year deadline for program revision, EPA is aware that some states may need additional time. EPA will work with states which have not revised their programs within three years. EPA will ask those states to demonstrate their level of effort, show progress to date, and provide dates when they will achieve major milestones for revising their programs and submitting revised applications. EPA will consider these factors before initiating state program approval withdrawal. One commenter was concerned about the cost to states of revising and reapplying for SPA. It is important for states to reapply for SPA to ensure they make appropriate changes to their programs.

Additional Changes to SPA Regulation

EPA is making these additional changes; they are not a direct result of these 40 CFR part 280 changes. Rather, the majority are corrections to the 1988 SPA regulation.

- § 281.10 – change subpart to part
- §§ 281.11(c) , 281.20(d), 281.21(a)(2), 281.23, and formerly § 281.51 – eliminate interim approval
- § 281.12(a)(2) – change Indian lands to Indian country
- § 281.32(e) – eliminate requirement to maintain upgrade records
- Formerly § 281.38 – eliminate reserved section for financial responsibility for USTs containing hazardous substances

- Move § 281.39 to § 281.38 – Lender Liability
- §§ 281.50(e) and 281.51(c)(1) – clarify how to provide public notice to attract statewide attention
- § 281.61 – move § 281.60(b) to § 281.61(b)(2)

The 1988 SPA regulation incorrectly uses the term subpart in § 280.10 and, therefore, EPA is correctly changing this to part. EPA has been using the term Indian country instead of Indian lands for years. We are now incorporating this term in this final SPA regulation; this does not alter the meaning. EPA is removing the reserved financial responsibility for USTs containing hazardous substances section (formerly § 281.38); moving the lender liability section from § 281.39 to § 281.38; and including the new operator training section in § 281.39. Because operator training needs to be in subpart C, which has no section numbers available, this eliminates the need to renumber subpart D. Also, the reserved financial responsibility for hazardous substances section is unnecessary since there is no corresponding requirement in 40 CFR part 280.

EPA is deleting the interim SPA approval language in §§ 281.11(c) and 281.51. In more than 20 years of the UST program, no state applied for interim approval; it is more beneficial to receive full approval all at once, rather than in steps. Also, because 40 states, including the District of Columbia and Puerto Rico, have SPA as of 2014, EPA thinks interim SPA approval is unnecessary at this time.

EPA is eliminating the requirement to maintain upgrade records for the operational life of an UST facility. This requirement in § 281.32(e) of the 1988 SPA regulation does not exist in 40 CFR part 280. In addition, except for airport hydrant systems and field-constructed tanks, EPA is no longer allowing upgrades.

EPA is clarifying how to provide public notice to attract statewide attention in §§ 281.50(e) and 281.51(c)(1). In today's digital age, it is unnecessary to require publication in a state's newspapers. Each state can determine the most appropriate methods for public notice and statewide attention.

EPA is also moving § 281.60(b) to § 281.61(b). This paragraph explains the procedure EPA will follow to withdraw approval after the conclusion of the proceeding to withdraw approval. EPA thinks this paragraph is better suited for § 281.61, which explains the procedures for withdrawing approval, as opposed to § 281.60, which explains the criteria for withdrawal.

VI. Overview of Estimated Costs and Benefits

EPA prepared an analysis of the potential incremental costs and benefits associated with this final UST regulation. This analysis is contained in the regulatory impact analysis document titled *Assessment of the Potential Costs, Benefits, and Other Impacts of the Final Revisions to EPA's Underground Storage Tank Regulations*, which is available in the docket for this action. The RIA estimated regulatory implementation and compliance costs, as well as benefits for the three regulatory options described in section IV, subsection F. In the RIA, EPA estimated regulatory compliance costs on an annualized basis for the three options: $160 million (Selected Option), $290 million (Option 1), and $70 million (Option 2). Separately, the analysis assessed the potential benefits of the final UST regulation. As discussed in the RIA, a substantial portion of the beneficial impacts associated with the final UST regulation are avoided cleanup costs as a result of preventing releases and reducing the severity of releases. This action is expected to have annual cost savings related to avoided costs of $310 million (range: $120 - $530 million)

per year under the Selected Option, $450 million (range: $210 - $670 million) per year under Option 1, and $230 million (range: $45 - $420 million) per year under Option 2. Due to data and resource constraints, EPA was unable to quantify some of the final UST regulation's benefits, including avoidance of human health risks, ecological benefits, and mitigation of acute exposure events and large-scale releases, such as those from airport hydrant systems and field-constructed tanks. EPA was also unable to place a monetary value on the groundwater protected by the final UST regulation, but estimates that this final UST regulation could potentially protect 50 billion to 240 billion gallons of groundwater each year.

VII. Statutory and Executive Orders

A. *Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

Under section 3(f)(1) of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is an economically significant regulatory action because it is likely to have an annual effect on the economy of $100 million or more. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and EO 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations are documented in the docket for this action. Also, as part of EO 13563, EPA encourages owners

and operators to maintain records electronically which simplifies compliance and recordkeeping by using 21st century technology tools.[121]

B. *Paperwork Reduction Act*

The information collection requirements (ICR) in this rule will be submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The information collection requirements are not enforceable until OMB approves them.

The proposed rule ICR was submitted to OMB on 11/18/2011 under OMB number 2050-0068, ICR number 1360.11. On 1/30/2012 OMB released a Notice of Action of comment filed on proposed rule and continue. They also issued this comment: "Terms of the previous clearance remain in effect. OMB is withholding approval at this time. Prior to publication of the final rule, the agency should provide a summary of any comments related to the information collection and their response, including any changes made to the ICR as a result of comments. In addition, the agency must enter the correct burden estimates. This action has no effect on any current approvals." The final rule ICR will be submitted to OMB under a new ICR OMB control number.

This action contains mandatory information collection requirements. The labor burden and associated costs for these requirements are estimated in the ICR supporting statement for this final action. The supporting statement identifies and estimates the burden for each of the changes to the regulation that include recordkeeping or reporting requirements. Changes

[121] Executive Order 13563, *Improving Regulation and Regulatory Review*, Section 3, http://www.gpo.gov/fdsys/pkg/FR-2011-01-21/pdf/2011-1385.pdf

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; regulating certain UST systems deferred in the 1988 UST regulation; adding new release prevention and detection technologies; and updating state program approval requirements to incorporate these new changes.

Based on the same data and cost calculations applied in the RIA for this action, but using the burden estimations for ICRs, the ICR supporting statement estimates an average annual labor hour burden of 344,000 hours and $12 million for the final UST regulation. One time capital and hourly costs are included in these estimates based on a three year annualization period. Burden is defined at 5 CFR 1320.3(b). The total universe of respondents for this ICR is comprised of 211,154 facilities and 56 states and territories. Burden is defined at 5 CFR 1320.3(b).

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9. When this ICR is approved by OMB, the agency will publish a technical amendment to 40 CFR part 9 in the *Federal Register* to display the OMB control number for the approved information collection requirements contained in this final rule.

C. *Regulatory Flexibility Act*

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any regulation subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute, unless the agency certifies that the

regulation will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final UST regulation on small entities, a small entity is defined as: (1) a small business as defined by the Small Business Administration's regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. The small entities directly regulated by this final rule are small businesses and small governmental jurisdictions. We have determined that less than 1 percent of potentially affected small firms in the retail motor fuel sector (NAICS 447) will experience an impact over 1 percent of revenues, but less than 3 percent of revenues. No small firms have impacts above 3 percent of revenues. In addition, we estimate that no small governmental jurisdictions will be impacted at 1 percent or 3 percent of revenues. This certification is based on the small entities analysis contained in the RIA for this final rule.

Although this final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless sought to reduce the impact of this rule on small entities. EPA conducted extensive outreach to determine how to change the 1988 UST regulation. EPA worked with representatives of owners and operators and reached out specifically to small businesses. In addition, EPA limited changes that would have required

major retrofits to UST systems, since this would place a high financial burden on small businesses. Finally, EPA provided numerous options for compliance in order to provide as much flexibility as possible for small entities. EPA also aligned compliance dates to facilitate owner and operator compliance.

D. *Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531-1538, requires federal agencies, unless otherwise prohibited by law, to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. This rule contains a federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year. Accordingly, EPA prepared under section 202 of the UMRA a written statement which is summarized below.

As estimated in the RIA, on an annualized basis, the total estimated regulatory compliance costs for the three options in this final action are $160 million (Selected Option), $290 million (Option 1), and $70 million (Option 2). Of this amount, annualized costs to state and local governments total $6.8 million under the Selected Option, $14 million under Option 1, and $3.6 million under Option 2. These costs consist of estimated regulatory compliance costs for state and local governments that currently own or operate UST systems and annualized costs of $120,000 for states to implement the final UST regulation. EPA estimates total annualized costs to owners and operators of tribally-owned UST systems are $0.67 million under the Selected Option. The estimated annualized cost to the private sector is approximately $130

million under the Selected Option, $270 million under Option 1, and $67 million under Option 2. While this final UST regulation may result in expenditures of $100 million or more for the private sector, thereby triggering section 202 of the UMRA, this final UST regulation is not subject to the requirements of section 204 of UMRA because EPA does not think state, local, and tribal governments will incur aggregate costs of over $100 million per year.

Consistent with section 205, EPA identified and considered a reasonable number of regulatory alternatives. This final UST regulation identifies the regulatory options EPA considered. The RIA estimates the annual cost across the three considered options may range between $70 million and $290 million. Section 205 of the UMRA requires federal agencies to select the least costly or most cost-effective regulatory alternative unless EPA publishes with the final regulation an explanation of why such alternative was not adopted. As discussed earlier in the preamble, EPA considered and evaluated variations of a subset of the regulatory requirements using two alternative options (Options 1 and 2). Despite Option 2's lower costs, EPA chose the Selected Option because it provides for greater protection of human health and the environment and better addresses stakeholder concerns.

This rule is not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. *Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on states, the relationship between the federal government and states, or the distribution of power and responsibilities among various levels of government, as specified in EO 13132.

Under this final action, total costs to all affected states and local governments (including direct compliance costs, notification costs, and state program costs) are approximately $9 million. This is not considered to be a substantial compliance cost under federalism requirements. Thus, Executive Order 13132 does not apply to this action.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicited comment on the proposed action from State and local officials.

F. *Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

Subject to Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the money necessary to pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

EPA has concluded that this action will have tribal implications to the extent that tribally-owned entities with UST systems in Indian country will be affected. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. EPA estimated total annualized costs for tribally-owned UST systems in Indian country to be $0.67 million.

EPA consulted with tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input to its development. EPA consulted with tribes

on possible changes to the UST regulation shortly after the passage of the Energy Policy Act of 2005. The Energy Policy Act directed EPA to coordinate with tribes in developing and implementing an UST program strategy in Indian country which would supplement the existing approach. EPA and tribes worked collaboratively to develop a tribal strategy.

There are certain key provisions of the Energy Policy Act that apply to states receiving federal Subtitle I money, but do not apply in Indian country. Nonetheless, EPA's goal in this final UST regulation is to establish in Indian country federal requirements similar to the Energy Policy Act provisions; this is an important step in achieving more consistent program results in release prevention. Both EPA and tribes recognize the importance of ensuring parity in program implementation between states and in Indian country.

In addition to early consultation with tribes, EPA also reached out to tribes as we started the official rulemaking process and while developing the 2011 proposed UST regulation. EPA sent letters to leaders of over 500 tribes, as well as to tribal regulatory staff, inviting their participation in developing the 2011 proposed UST regulation. EPA also held conference calls for tribes to provide input. EPA heard from both tribal officials who work as regulators as well as representatives of owners and operators of UST systems in Indian country. The tribal regulators raised concerns about ensuring parity of environmental protection between states and Indian country.

EPA determined that this final UST regulation is needed to ensure parity between UST systems in states and in Indian country. This final UST regulation is also needed to ensure equipment is both installed and working properly, which will protect the environment from potential releases.

As required by section 7(a), EPA's Tribal Consultation Official certified that the requirements of the Executive Order have been met in a meaningful and timely manner. EPA included a copy of the certification in the docket for this action.

G. *Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not subject to EO 13045 (62 FR 19885, April 23, 1997) because the Agency does not think the environmental health risks or safety risks addressed by this action present a disproportionate risk to children. EPA's risk assessment for this action examines potential impacts to groundwater and subsequent chemical transport, exposure, and risk. While the risk assessment did not specifically measure exposure to children, the general exposure scenarios reflect four exposure pathways that have the most significant potential for human health impacts. They are:

- Ingestion of chemicals in groundwater that have migrated from the source area to residential drinking water wells;
- Inhalation of volatile chemicals when showering with contaminated groundwater;
- Dermal contact with chemicals while bathing or showering with contaminated groundwater; and
- Inhalation of vapors that may migrate upward from contaminated groundwater into overlying buildings.

Adults and children can potentially be exposed through all four exposure pathways considered. For adults, inhalation of vapors while showering is the most significant exposure

pathway; for children, ingestion is the most significant pathway, because they are assumed to take baths and are, therefore, not exposed via shower vapor inhalation. As a result of the longer exposure from showering, adults are more sensitive receptors for cancer effects compared to children, particularly those under age 5 who are assumed to take more baths and fewer showers.[122]

While the screening level risk assessment is limited in that it only examines benzene impacts, the final UST regulation will likely reduce other contaminant exposures to children in a similar pattern and will not create significant adverse impacts on children's health.

The screening level population analysis performed to examine EO 12898 shows that children under 18 years and children under 5 years of age are slightly less likely to be found in the vicinity of UST facilities. This suggests that the impacts of this action will not have a disproportionate impact on children's health. Moreover, because all regulatory options in this action will increase regulatory stringency and reduce the number and size of releases, EPA does not expect this action to have any disproportionate adverse impact on children.

H. *Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use*

This action is not a significant energy action as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The following summarizes EPA's assessment of the energy impacts this final UST regulation will have on energy supply, distribution, and use.

[122] United States Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, *Toxicological Profile For Polycyclic Aromatic Hydrocarbons*, August 1995

This final UST regulation consists of additional regulatory requirements that apply to the owners and operators of underground storage tanks. To the extent that the final UST regulation affects the motor fuel sector, it does so at the retail motor fuel sales level, rather than the level of refineries or distributors, who supply the retail stations with motor fuel. Therefore, we do not expect this final UST regulation to have a significant adverse impact on energy supply or distribution.

The additional regulatory requirements contained in this final UST regulation may increase compliance costs for owners and operators of retail motor fuel stations. If owners and operators of retail motor fuel stations affected by the final UST regulation can pass through their increased compliance costs, energy use may be affected via higher energy prices caused by the final UST regulation. However, we do not expect a significant change in retail gasoline prices to result from this final UST regulation for the following reasons:

- Economic analyses of retail fuel prices revealed that demand for gasoline is highly sensitive to price (elastic) within localized geographic areas – as a result, if one motor fuel retailer in an area passes through increases in compliance costs by increasing gasoline prices, while another does not, the one with higher prices is at a competitive disadvantage; and
- Retail motor fuel stations often have associated stores or services, such as car washes, repair operations, and convenience outlets, on which they can more successfully pass through increases in compliance costs.

Furthermore, when considered in the context of total fuel consumption in the United States, this final UST regulation will represent only a very small fraction of motor fuel prices, even if fully passed through to consumers. According to the Bureau of Transportation Statistics,

the United States consumed approximately 169 billion gallons of motor fuel (including gasoline and diesel) in 2011 at an average price of $3.73.[123] This implies that consumers spent $629 billion in 2012 on motor fuel. The overall cost of the final UST regulation is approximately $160 million, less than 0.1 percent of the amount spent by end users on motor fuel in 2012. In comparison, an increase of 1 cent in the average price of motor fuel in 2012 would have increased the total cost to consumers by approximately $1.7 billion. Given these circumstances, this final UST regulation should not measurably impact retail motor fuel prices. As a result, EPA does not expect this final UST regulation to have a significant adverse impact on energy prices or use.

I. *National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law No. 104-113 (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are

[123] 2011 is the latest year data available from Bureau of Transportation Statistics for gallons of motor fuel consumed, as reported by: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics. Accessed at: http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_09.html. The 2012 prices per gallon for all grades of retail motor gasoline and No. 2 diesel fuel (all concentrations of sulfur) were $3.63 and $3.97, respectively, as reported by: U.S. Energy Information Administration. Short-Term Energy Outlook - Real and Nominal Energy Prices for 2012. Accessed at: http://www.eia.gov/forecasts/steo/realprices/. We weight these prices according to prime supplier sales volumes in 2012 published by the Energy Information Administration, which summed to 347,234.5 thousands of gallons per day for gasoline and 143,270.6 thousands of gallons per day for all grades of diesel fuel (U.S. Energy Information Administration. Petroleum & Other Liquids. Prime Supplier Sales Volumes. Accessed at: http://www.eia.gov/dnav/pet/pet_cons_prim_dcu_nus_a.htm

developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when EPA decides not to use available and applicable voluntary consensus standards.

This action uses technical standards. EPA has decided to use voluntary consensus standards, called codes of practice, described in section E-2. These codes of practice meet the objectives of this action by establishing criteria for the design, construction, and maintenance of underground storage tanks.

J. *Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

Executive Order 12898 (59 FR 7629, Feb. 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this action will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population**.**

To inform us about the socioeconomic characteristics of communities potentially affected by this final UST regulation, EPA conducted a screening analysis under the 2011 proposed UST regulation to examine whether there is a statistically significant disparity between socioeconomic characteristics of populations located near UST facilities and those that are not.[124] As discussed in the RIA, the results indicate that minority and low-income populations are slightly more likely to be located near UST facilities. An environmental justice analysis would then require an assessment of whether there would be disproportionate and adverse impacts on these populations. However, because all regulatory options considered in this final UST regulation would increase regulatory stringency and reduce the number and size of releases, EPA does not anticipate the final UST regulation will have any disproportionately high and adverse human health or environmental effects on these minority or low-income communities or any community.

K. *Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq*., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to

[124] Note that the affected populations identified in the screening analysis summarized here are simply defined by specific demographics surrounding UST locations. These affected populations are not necessarily equivalent to communities that others have specifically identified as environmental justice communities

publication of the rule in the *Federal Register*. A Major rule cannot take effect until 60 days after it is published in the *Federal Register*. This action is a "major rule" as defined by 5 U.S.C. 804(2). This rule is effective [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER.]

List of Subjects

40 CFR Part 280

Environmental protection, Administrative practice and procedures, Confidential business information, Groundwater, Hazardous materials, Petroleum, Reporting and recordkeeping requirements, Underground storage tanks, Water pollution control, Water supply.

40 CFR Part 281

Environmental protection, Administrative practice and procedures, Hazardous substances, Petroleum, State program approval, Underground storage tanks.

Dated: June 19, 2015.

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Gina McCarthy,

Administrator.

For the reasons set out in the preamble, parts 280 and 281 of title 40, chapter I of the Code of Federal Regulations are amended as follows:

1. Revise part 280 to read as follows:

PART 280—TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS (UST)

Subpart A—Program Scope and Installation Requirements for Partially Excluded UST Systems

Sec.
280.10 Applicability.
280.11 Installation requirements for partially excluded UST systems.
280.12 Definitions.

Subpart B—UST Systems: Design, Construction, Installation and Notification

280.20 Performance standards for new UST systems.
280.21 Upgrading of existing UST systems.
280.22 Notification requirements.

Subpart C—General Operating Requirements

280.30 Spill and overfill control.
280.31 Operation and maintenance of corrosion protection.
280.32 Compatibility.
280.33 Repairs allowed.
280.34 Reporting and recordkeeping.
280.35 Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.
280.36 Periodic operation and maintenance walkthrough inspections.

Subpart D—Release Detection

280.40 General requirements for all UST systems.
280.41 Requirements for petroleum UST systems.
280.42 Requirements for hazardous substance UST systems.
280.43 Methods of release detection for tanks.
280.44 Methods of release detection for piping.
280.45 Release detection recordkeeping.

Subpart E – Release Reporting, Investigation, and Confirmation

280.50 Reporting of suspected releases.
280.51 Investigation due to off-site impacts.
280.52 Release investigation and confirmation steps.
280.53 Reporting and cleanup of spills and overfills.

Subpart F – Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

280.60 General.
280.61 Initial response.
280.62 Initial abatement measures and site check.
280.63 Initial site characterization.
280.64 Free product removal.
280.65 Investigations for soil and groundwater cleanup.
280.66 Corrective action plan.
280.67 Public participation.

Subpart G – Out-of-Service UST Systems and Closure

280.70 Temporary closure.
280.71 Permanent closure and changes-in-service.
280.72 Assessing the site at closure or change-in-service.
280.73 Applicability to previously closed UST systems.
280.74 Closure records.

Subpart H – Financial Responsibility

280.90 Applicability.
280.91 Compliance dates.
280.92 Definition of terms.
280.93 Amount and scope of required financial responsibility.
280.94 Allowable mechanisms and combinations of mechanisms.
280.95 Financial test of self-insurance.
280.96 Guarantee.
280.97 Insurance and risk retention group coverage.
280.98 Surety bond.
280.99 Letter of credit.

280.100 Use of state-required mechanism.
280.101 State fund or other state assurance.
280.102 Trust fund.
280.103 Standby trust fund.
280.104 Local government bond rating test.
280.105 Local government financial test.
280.106 Local government guarantee.
280.107 Local government fund.
280.108 Substitution of financial assurance mechanisms by owner or operator.
280.109 Cancellation or nonrenewal by a provider of financial assurance.
280.110 Reporting by owner or operator.
280.111 Recordkeeping.
280.112 Drawing on financial assurance mechanisms.
280.113 Release from the requirements.
280.114 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.
280.115 Replenishment of guarantees, letters of credit, or surety bonds.
280.116 Suspension of enforcement. [Reserved]

Subpart I – Lender Liability

280.200 Definitions.
280.210 Participation in management.
280.220 Ownership of an underground storage tank or underground storage tank system or facility or property on which an underground storage tank or underground storage tank system is located.
280.230 Operating an underground storage tank or underground storage tank system.

Subpart J – Operator Training

280.240 General requirement for all UST systems.
280.241 Designation of Class A, B, and C operators.
280.242 Requirements for operator training.
280.243 Timing of operator training.
280.244 Retraining.
280.245 Documentation.

Subpart K – UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems

280.250 Definitions.
280.251 General requirements.
280.252 Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems.

Appendix I to Part 280 – Notification for Underground Storage Tanks (Form)

Appendix II to Part 280 – Notification of Ownership Change for Underground Storage Tanks (Form)
Appendix III to Part 280 – Statement for Shipping Tickets and Invoices

Authority: 42 USC 6912, 6991, 6991(a), 6991(b), 6991(c), 6991(d), 6991(e), 6991(f), 6991(g), 6991(h), 6991(i).

Subpart A—Program Scope and Installation Requirements for Partially Excluded UST Systems

§ 280.10 Applicability.

(a) The requirements of this part apply to all owners and operators of an UST system as defined in § 280.12 except as otherwise provided in paragraphs (b) and (c) of this section.

(1) *Previously deferred UST systems*. Airport hydrant fuel distribution systems, UST systems with field-constructed tanks, and UST systems that store fuel solely for use by emergency power generators must meet the requirements of this part as follows:

(i) Airport hydrant fuel distribution systems and UST systems with field-constructed tanks must meet the requirements in subpart K of this part.

(ii) UST systems that store fuel solely for use by emergency power generators installed on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet the subpart D requirements on or before October 13, 2018.

(iii) UST systems that store fuel solely for use by emergency power generators installed after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet all applicable requirements of this part at installation.

(2) Any UST system listed in paragraph (c) of this section must meet the requirements of § 280.11.

(b) *Exclusions*. The following UST systems are excluded from the requirements of this part:

(1) Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances.

(2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 402 or 307(b) of the Clean Water Act.

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

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

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

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

(c) *Partial Exclusions*. Subparts B, C, D, E, G, J, and K of this part do not apply to:

(1) Wastewater treatment tank systems not covered under paragraph (b)(2) of this section;

(2) Aboveground storage tanks associated with:

(i) Airport hydrant fuel distribution systems regulated under subpart K of this part; and

(ii) UST systems with field-constructed tanks regulated under subpart K of this part;

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

(4) Any UST system that is part of an emergency generator system at nuclear power generation facilities licensed by the Nuclear Regulatory Commission and subject to Nuclear

Regulatory Commission requirements regarding design and quality criteria, including but not limited to 10 CFR part 50.

§ 280.11 Installation requirements for partially excluded UST systems.

(a) Owners and operators must install an UST system listed in § 280.10(c)(1), (3), or (4) storing regulated substances (whether of single or double wall construction) that meets the following requirements:

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

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

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

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

Note to paragraphs (a) and (b). The following codes of practice may be used as guidance for complying with this section:

(A) NACE International Standard Practice SP 0285, “External Corrosion Control of

Underground Storage Tank Systems by Cathodic Protection";

(B) NACE International Standard Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems";

(C) American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; or

(D) Steel Tank Institute Recommended Practice R892, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems".

§ 280.12 Definitions.

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

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

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

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

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

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

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

Class A operator means the individual who has primary responsibility to operate and maintain the UST system in accordance with applicable requirements established by the implementing agency. The Class A operator typically manages resources and personnel, such as establishing work assignments, to achieve and maintain compliance with regulatory requirements.

Class B operator means the individual who has day-to-day responsibility for implementing applicable regulatory requirements established by the implementing agency. The Class B operator typically implements in-field aspects of operation, maintenance, and associated recordkeeping for the UST system.

Class C operator means the individual responsible for initially addressing emergencies presented by a spill or release from an UST system. The Class C operator typically controls or monitors the dispensing or sale of regulated substances.

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

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

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

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

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

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

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

Dispenser means equipment located aboveground that dispenses regulated substances from the UST system.

Dispenser system means the dispenser and the equipment necessary to connect the dispenser to the underground storage tank system.

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

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

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

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

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

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

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

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

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

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

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

Heating oil means petroleum that is No. 1, No. 2, No. 4--light, No. 4--heavy, No. 5--light, No. 5--heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy

Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

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

Implementing agency means EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program.

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

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

Motor fuel means a complex blend of hydrocarbons typically used in the operation of a motor engine, such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any blend containing one or more of these substances (for example: motor gasoline blended with alcohol).

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

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

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

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

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

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

Owner means:

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

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

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

Petroleum UST system means an underground storage tank system that contains petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Pipe or *Piping* means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

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

Regulated substance means:

(1) Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C); and

(2) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term regulated substance includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

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

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

Repair means to restore to proper operating condition a tank, pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment or other UST system component that has caused a release of product from the UST system or has failed to function properly.

Replaced means:

(1) For a tank - to remove a tank and install another tank.

(2) For piping - to remove 50 percent or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run.

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

SARA means the Superfund Amendments and Reauthorization Act of 1986.

Secondary containment or *Secondarily contained* means a release prevention and release detection system for a tank or piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of piping.

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

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

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

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

Training program means any program that provides information to and evaluates the knowledge of a Class A, Class B, or Class C operator through testing, practical demonstration, or another approach acceptable to the implementing agency regarding requirements for UST systems that meet the requirements of subpart J of this part.

Under-dispenser containment or *UDC* means containment underneath a dispenser system designed to prevent leaks from the dispenser and piping within or above the UDC from reaching soil or groundwater.

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

Underground release means any belowground release.

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

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

(2) Tank used for storing heating oil for consumptive use on the premises where stored;

(3) Septic tank;

(4) Pipeline facility (including gathering lines):

(i) Which is regulated under 49 U.S.C. chapter 601; or

(ii) Which is an intrastate pipeline facility regulated under state laws as provided in 49 U.S.C. chapter 601, and which is determined by the Secretary of Transportation to be connected to a pipeline, or to be operated or intended to be capable of operating at pipeline pressure or as an integral part of a pipeline;

(5) Surface impoundment, pit, pond, or lagoon;

(6) Storm water or wastewater collection system;

(7) Flow-through process tank;

(8) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

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

Note to the definition of *Underground storage tank* or *UST*. The term *underground storage tank* or *UST* does not include any pipes connected to any tank which is described in paragraphs (1) through (9) of this definition.

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

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

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

Subpart B—UST Systems: Design, Construction, Installation and Notification

§ 280.20 Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems must meet the following requirements. In addition, except for suction piping that meets the requirements of § 280.41(b)(1)(ii)(A) through (E), tanks and piping installed or replaced after [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must be secondarily contained and use interstitial monitoring in accordance with § 280.43(g). Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. For cases where the piping is considered to be replaced, the entire piping run must be secondarily contained.

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

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

Note to paragraph (a)(1). The following codes of practice may be used to comply with paragraph (a)(1) of this section:

(A) Underwriters Laboratories Standard 1316, “Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures”; or

(B) Underwriter’s Laboratories of Canada S615, “Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids”.

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

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

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

(iii) Impressed current systems are designed to allow determination of current operating status as required in § 280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with § 280.31 or according to guidelines established by the implementing agency; or

Note to paragraph (a)(2). The following codes of practice may be used to comply with paragraph (a)(2) of this section:

(A) Steel Tank Institute “Specification STI-P3® Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks”;

(B) Underwriters Laboratories Standard 1746, “External Corrosion Protection Systems for Steel Underground Storage Tanks”;

(C) Underwriters Laboratories of Canada S603, “Standard for Steel Underground Tanks for Flammable and Combustible Liquids,” and S603.1, “Standard for External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids,” and

S631, “Standard for Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems”;

(D) Steel Tank Institute Standard F841, “Standard for Dual Wall Underground Steel Storage Tanks”; or

(E) NACE International Standard Practice SP 0285, “External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection,” and Underwriters Laboratories Standard 58, “Standard for Steel Underground Tanks for Flammable and Combustible Liquids”.

(3) The tank is constructed of steel and clad or jacketed with a non-corrodible material; or

Note to paragraph (a)(3). The following codes of practice may be used to comply with paragraph (a)(3) of this section:

(A) Underwriters Laboratories Standard 1746, “External Corrosion Protection Systems for Steel Underground Storage Tanks”;

(B) Steel Tank Institute ACT-100® Specification F894, “Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks”;

(C) Steel Tank Institute ACT-100-U® Specification F961, “Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks”; or

(D) Steel Tank Institute Specification F922, “Steel Tank Institute Specification for Permatank®”.

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

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

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (a)(4)(i) of this section for the remaining life of the tank; or

(5) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a)(1) through (4) of this section.

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

(1) The piping is constructed of a non-corrodible material; or

Note to paragraph (b)(1). The following codes of practice may be used to comply with paragraph (b)(1) of this section:

(A) Underwriters Laboratories Standard 971, "Nonmetallic Underground Piping for Flammable Liquids"; or

(B) Underwriters Laboratories of Canada Standard S660, "Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids".

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

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

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

(iii) Impressed current systems are designed to allow determination of current operating status as required in § 280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with § 280.31 or guidelines established by the implementing agency; or

Note to paragraph (b)(2). The following codes of practice may be used to comply with paragraph (b)(2) of this section:

(A) American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems";

(B) Underwriters Laboratories Subject 971A, "Outline of Investigation for Metallic Underground Fuel Pipe";

(C) Steel Tank Institute Recommended Practice R892, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems";

(D) NACE International Standard Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems"; or

(E) NACE International Standard Practice SP 0285, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection".

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

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

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section for the remaining life of the piping; or

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

(c) *Spill and overfill prevention equipment*. (1) Except as provided in paragraphs (c)(2) and (3) of this section, to prevent spilling and overfilling associated with product transfer to the UST system, owners and operators must use the following spill and overfill prevention equipment:

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

(ii) Overfill prevention equipment that will:

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

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

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

(2) Owners and operators are not required to use the spill and overfill prevention equipment specified in paragraph (c)(1) of this section if:

(i) Alternative equipment is used that is determined by the implementing agency to be no less protective of human health and the environment than the equipment specified in paragraph (c)(1)(i) or (ii) of this section; or

(ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(3) Flow restrictors used in vent lines may not be used to comply with paragraph (c)(1)(ii) of this section when overfill prevention is installed or replaced after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(4) Spill and overfill prevention equipment must be periodically tested or inspected in accordance with § 280.35.

(d) *Installation.* The UST system must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

Note to paragraph (d). Tank and piping system installation practices and procedures described in the following codes of practice may be used to comply with the requirements of paragraph (d) of this section:

(A) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System";

(B) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(C) National Fire Protection Association Standard 30, “Flammable and Combustible Liquids Code” and Standard 30A, “Code for Motor Fuel Dispensing Facilities and Repair Garages”.

(e) *Certification of installation*. All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST notification form in accordance with § 280.22.

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

(2) The installer has been certified or licensed by the implementing agency; or

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

(4) The installation has been inspected and approved by the implementing agency; or

(5) All work listed in the manufacturer’s installation checklists has been completed; or

(6) The owner and operator have complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the implementing agency to be no less protective of human health and the environment.

(f) *Dispenser systems*. Each UST system must be equipped with under-dispenser containment for any new dispenser system installed after [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(1) A dispenser system is considered new when both the dispenser and the equipment needed to connect the dispenser to the underground storage tank system are installed at an UST facility. The equipment necessary to connect the dispenser to the underground storage tank

system includes check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are underneath the dispenser and connect the dispenser to the underground piping.

(2) Under-dispenser containment must be liquid-tight on its sides, bottom, and at any penetrations. Under-dispenser containment must allow for visual inspection and access to the components in the containment system or be periodically monitored for leaks from the dispenser system.

§ 280.21 Upgrading of existing UST systems.

Owners and operators must permanently close (in accordance with subpart G of this part) any UST system that does not meet the new UST system performance standards in § 280.20 or has not been upgraded in accordance with paragraphs (b) through (d) of this section. This does not apply to previously deferred UST systems described in subpart K of this part and where an upgrade is determined to be appropriate by the implementing agency.

(a) *Alternatives allowed*. All existing UST systems must comply with one of the following requirements:

(1) New UST system performance standards under § 280.20;

(2) The upgrading requirements in paragraphs (b) through (d) of this section; or

(3) Closure requirements under subpart G of this part, including applicable requirements for corrective action under subpart F of this part.

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

(1) *Interior lining*. Tanks upgraded by internal lining must meet the following:

(i) The lining was installed in accordance with the requirements of § 280.33; and

(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. If the internal lining is no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, then the lined tank must be permanently closed in accordance with subpart G of this part.

(2) *Cathodic protection*. Tanks upgraded by cathodic protection must meet the requirements of § 280.20(a)(2)(ii), (iii), and (iv) and the integrity of the tank must have been ensured using one of the following methods:

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

(ii) The tank had been installed for less than 10 years and is monitored monthly for releases in accordance with § 280.43(d) through (i); or

(iii) The tank had been installed for less than 10 years and was assessed for corrosion holes by conducting two tightness tests that meet the requirements of § 280.43(c). The first tightness test must have been conducted prior to installing the cathodic protection system. The second tightness test must have been conducted between three and six months following the first operation of the cathodic protection system; or

(iv) The tank was assessed for corrosion holes by a method that is determined by the implementing agency to prevent releases in a manner that is no less protective of human health and the environment than paragraphs (b)(2)(i) through (iii) of this section.

(3) *Internal lining combined with cathodic protection*. Tanks upgraded by both internal lining and cathodic protection must meet the following:

(i) The lining was installed in accordance with the requirements of § 280.33; and

(ii) The cathodic protection system meets the requirements of § 280.20(a)(2)(ii), (iii), and (iv).

Note to paragraph (b). The following historical codes of practice were listed as options for complying with paragraph (b) of this section:

(A) American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

(B) National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection";

(C) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

(D) American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems".

Note to paragraph b(1)(ii). The following codes of practice may be used to comply with the periodic lining inspection requirement of this section:

(A) American Petroleum Institute Recommended Practice 1631, "Interior Lining and Periodic Inspection of Underground Storage Tanks";

(B) National Leak Prevention Association Standard 631, Chapter B "Future Internal Inspection Requirements for Lined Tanks"; or

(C) Ken Wilcox Associates Recommended Practice, "Recommended Practice for Inspecting Buried Lined Steel Tanks Using a Video Camera".

(c) *Piping upgrading requirements*. Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of § 280.20(b)(2)(ii), (iii), and (iv).

Note to paragraph (c). The codes of practice listed in the note following § 280.20(b)(2) may be used to comply with this requirement.

(d) *Spill and overfill prevention equipment*. To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with UST system spill and overfill prevention equipment requirements specified in § 280.20(c).

§ 280.22 Notification requirements.

(a) After May 8, 1986, an owner must submit notice of a tank system's existence to the implementing agency within 30 days of bringing the underground storage tank system into use. Owners must use the form in appendix I of this part or a state form in accordance with paragraph (c) of this section.

Note to paragraph (a). Owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, on a form published by EPA on November 8, 1985 unless notice was given pursuant to section 103(c) of CERCLA. Owners and operators who have not complied with the notification requirements may use portions I through X of the notification form contained in appendix I of this part.

(b) Within 30 days of acquisition, any person who assumes ownership of a regulated underground storage tank system, except as described in paragraph (a) of this section, must submit a notice of the ownership change to the implementing agency, using the form in appendix II of this part or a state form in accordance with paragraph (c) of this section.

(c) In states where state law, regulations, or procedures require owners to use forms that differ from those set forth in appendix I and appendix II of this part to fulfill the requirements of this section, the state forms may be submitted in lieu of the forms set forth in appendix I and appendix II. If a state requires that its form be used in lieu of the form presented in appendix I

and appendix II, such form must, at a minimum, collect the information prescribed in appendix I and appendix II.

(d) Owners required to submit notices under paragraph (a) or (b) of this section must provide notices to the appropriate implementing agency for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

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

(1) Installation of tanks and piping under § 280.20(e);

(2) Cathodic protection of steel tanks and piping under § 280.20(a) and (b);

(3) Financial responsibility under subpart H of this part; and

(4) Release detection under §§ 280.41 and 280.42.

(f) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in § 280.20(d).

(g) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under paragraph (a) of this section. The statement provided in appendix III of this part, when used on shipping tickets and invoices, may be used to comply with this requirement.

Subpart C -- General Operating Requirements

§ 280.30 Spill and overfill control.

(a) Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

Note to paragraph (a). The transfer procedures described in National Fire Protection Association Standard 385, "Standard for Tank Vehicles for Flammable and Combustible Liquids" or American Petroleum Institute Recommended Practice 1007, "Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles" may be used to comply with paragraph (a) of this section. Further guidance on spill and overfill prevention appears in American Petroleum Institute Recommended Practice 1621, "Bulk Liquid Stock Control at Retail Outlets".

(b) The owner and operator must report, investigate, and clean up any spills and overfills in accordance with § 280.53.

§ 280.31 Operation and maintenance of corrosion protection.

All owners and operators of metal UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented until the UST system is permanently closed or undergoes a change-in-service pursuant to § 280.71:

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

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

(1) *Frequency*. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the implementing agency; and

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

Note to paragraph (b). The following codes of practice may be used to comply with paragraph (b) of this section:

(A) NACE International Test Method TM 0101, "Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage Tank Systems";

(B) NACE International Test Method TM0497, "Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems";

(C) Steel Tank Institute Recommended Practice R051, "Cathodic Protection Testing Procedures for STI-P3® USTs";

(D) NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection"; or

(E) NACE International Standard Practice SP 0169, “Control of External Corrosion on Underground or Submerged Metallic Piping Systems”.

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

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with § 280.34) to demonstrate compliance with the performance standards in this section. These records must provide the following:

(1) The results of the last three inspections required in paragraph (c) of this section; and

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

§ 280.32 Compatibility.

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

(b) Owners and operators must notify the implementing agency at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substance identified by the implementing agency. In addition, owners and operators with UST systems storing these regulated substances must meet one of the following:

(1) Demonstrate compatibility of the UST system (including the tank, piping, containment sumps, pumping equipment, release detection equipment, spill equipment, and overfill

equipment). Owners and operators may demonstrate compatibility of the UST system by using one of the following options:

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

(ii) Equipment or component manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

(2) Use another option determined by the implementing agency to be no less protective of human health and the environment than the options listed in paragraph (b)(1) of this section.

(c) Owners and operators must maintain records in accordance with § 280.34(b) documenting compliance with paragraph (b) of this section for as long as the UST system is used to store the regulated substance.

Note to §280.32. The following code of practice may be useful in complying with this section: American Petroleum Institute Recommended Practice 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations."

§ 280.33 Repairs allowed.

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

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

Note to paragraph (a). The following codes of practice may be used to comply with paragraph (a) of this section:

(A) National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

(B) American Petroleum Institute Recommended Practice RP 2200, "Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines";

(C) American Petroleum Institute Recommended Practice RP 1631, "Interior Lining and Periodic Inspection of Underground Storage Tanks";

(D) National Fire Protection Association Standard 326, "Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair";

(E) National Leak Prevention Association Standard 631, Chapter A, "Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks";

(F) Steel Tank Institute Recommended Practice R972, "Recommended Practice for the Addition of Supplemental Anodes to STI-P3® Tanks";

(G) NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection"; or

(H) Fiberglass Tank and Pipe Institute Recommended Practice T-95-02, "Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks".

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

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

(d) Repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps used for interstitial monitoring of piping must have the secondary containment tested for tightness according to the manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or according to requirements established by the implementing agency within 30 days following the date of completion of the repair. All other repairs to tanks and piping must be tightness tested in accordance with § 280.43(c) and § 280.44(b) within 30 days following the date of the completion of the repair except as provided in paragraphs (d)(1) through (3) of this section:

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

(2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in § 280.43(d) through (i); or

(3) Another test method is used that is determined by the implementing agency to be no less protective of human health and the environment than those listed in paragraphs (d)(1) and (2) of this section.

Note to paragraph (d). The following codes of practice may be used to comply with paragraph (d) of this section:

(A) Steel Tank Institute Recommended Practice R012, "Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks"; or

(B) Fiberglass Tank and Pipe Institute Protocol, "Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks with Dry Annular Space".

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

(e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with § 280.31(b) and (c) to ensure that it is operating properly.

(f) Within 30 days following any repair to spill or overfill prevention equipment, the repaired spill or overfill prevention equipment must be tested or inspected, as appropriate, in accordance with § 280.35 to ensure it is operating properly.

(g) UST system owners and operators must maintain records (in accordance with § 280.34) of each repair until the UST system is permanently closed or undergoes a change-in-service pursuant to § 280.71.

§ 280.34 Reporting and recordkeeping.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the implementing agency, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to section 9005 of Subtitle I of the Solid Waste Disposal Act, as amended.

(a) *Reporting.* Owners and operators must submit the following information to the implementing agency:

(1) Notification for all UST systems (§ 280.22), which includes certification of installation for new UST systems (§ 280.20(e)) and notification when any person assumes ownership of an UST system (§ 280.22(b));

(2) Notification prior to UST systems switching to certain regulated substances (§ 280.32(b));

(3) Reports of all releases including suspected releases (§ 280.50), spills and overfills (§ 280.53), and confirmed releases (§ 280.61);

(4) Corrective actions planned or taken including initial abatement measures (§ 280.62), initial site characterization (§ 280.63), free product removal (§ 280.64), investigation of soil and groundwater cleanup (§ 280.65), and corrective action plan (§ 280.66); and

(5) A notification before permanent closure or change-in-service (§ 280.71).

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

(1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (§ 280.20(a)(4); § 280.20(b)(3)).

(2) Documentation of operation of corrosion protection equipment (§ 280.31(d));

(3) Documentation of compatibility for UST systems (§ 280.32(c));

(4) Documentation of UST system repairs (§ 280.33(g));

(5) Documentation of compliance for spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping (§ 280.35(c));

(6) Documentation of periodic walkthrough inspections (§ 280.36(b));

(7) Documentation of compliance with release detection requirements (§ 280.45);

(8) Results of the site investigation conducted at permanent closure (§ 280.74); and

(9) Documentation of operator training (§ 280.245).

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

(1) At the UST site and immediately available for inspection by the implementing agency; or

(2) At a readily available alternative site and be provided for inspection to the implementing agency upon request.

(3) In the case of permanent closure records required under § 280.74, owners and operators are also provided with the additional alternative of mailing closure records to the implementing agency if they cannot be kept at the site or an alternative site as indicated in paragraphs (c)(1) and (2) of this section.

§ 280.35 Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.

(a) Owners and operators of UST systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment:

(1) Spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following:

(i) The equipment is double walled and the integrity of both walls is periodically monitored at a frequency not less than the frequency of the walkthrough inspections described in § 280.36. Owners and operators must begin meeting paragraph (a)(1)(ii) of this section and conduct a test within 30 days of discontinuing periodic monitoring of this equipment; or

(ii) The spill prevention equipment and containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the following criteria:

(A) Requirements developed by the manufacturer (Note: Owners and operators may use

this option only if the manufacturer has developed requirements);

(B) Code of practice developed by a nationally recognized association or independent testing laboratory; or

(C) Requirements determined by the implementing agency to be no less protective of human health and the environment than the requirements listed in paragraphs (a)(1)(ii)(A) and (B) of this section.

(2) Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in § 280.20(c) and will activate when regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in paragraph (a)(1)(ii)(A) through (C) of this section.

Note to paragraphs (a)(1)(ii) and (a)(2). The following code of practice may be used to comply with paragraphs (a)(1)(ii) and (a)(2) of this section: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

(b) Owners and operators must begin meeting these requirements as follows:

(1) For UST systems in use on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], the initial spill prevention equipment test, containment sump test and overfill prevention equipment inspection must be conducted not later than October 13, 2018.

(2) For UST systems brought into use after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], these requirements apply at installation.

(c) Owners and operators must maintain records as follows (in accordance with § 280.34)

for spill prevention equipment, containment sumps used for interstitial monitoring of piping, and overfill prevention equipment:

(1) All records of testing or inspection must be maintained for three years; and

(2) For spill prevention equipment and containment sumps used for interstitial monitoring of piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

§ 280.36 Periodic operation and maintenance walkthrough inspections.

(a) To properly operate and maintain UST systems, not later than October 13, 2018 owners and operators must meet one of the following:

(1) Conduct a walkthrough inspection that, at a minimum, checks the following equipment as specified below:

(i) Every 30 days (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery):

(A) Spill prevention equipment - visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it is securely on the fill pipe; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area; and

(B) Release detection equipment - check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present; and ensure records of release detection testing are reviewed and current; and

(ii) Annually:

(A) Containment sumps - visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area; and

(B) Hand held release detection equipment - check devices such as tank gauge sticks or groundwater bailers for operability and serviceability;

(2) Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to paragraph (a)(1) of this section; or

Note to paragraph (a)(2). The following code of practice may be used to comply with paragraph (a)(2) of this section: Petroleum Equipment Institute Recommended Practice RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems".

(3) Conduct operation and maintenance walkthrough inspections developed by the implementing agency that checks equipment comparable to paragraph (a)(1) of this section.

(b) Owners and operators must maintain records (in accordance with § 280.34) of operation and maintenance walkthrough inspections for one year. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries.

Subpart D -- Release Detection

§ 280.40 General requirements for all UST systems.

(a) Owners and operators of UST systems must 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 and calibrated in accordance with the manufacturer's instructions;

(3) Beginning on October 13, 2018, is operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the implementing agency to be no less protective of human health and the environment than the two options listed in paragraphs (a)(1) and (2) of this section. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:

(i) Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup;

(ii) Probes and sensors: inspect for residual buildup; ensure floats move freely; ensure shaft is not damaged; ensure cables are free of kinks and breaks; test alarm operability and communication with controller;

(iii) Automatic line leak detector: test operation to meet criteria in § 280.44(a) by simulating a leak;

(iv) Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and

(v) Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

Note to paragraph (a)(3). The following code of practice may be used to comply with paragraph (a)(3) of this section: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities".

(4) Meets the performance requirements in § 280.43, § 280.44, or subpart K of this part, as applicable, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods listed in § 280.43(b), (c), (d), (h), and (i), § 280.44(a) and (b), and subpart K of this part, must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(b) When a release detection method operated in accordance with the performance standards in § 280.43, § 280.44, or subpart K of this part indicates a release may have occurred, owners and operators must notify the implementing agency in accordance with subpart E of this part.

(c) Any UST system that cannot apply a method of release detection that complies with the requirements of this subpart must complete the closure procedures in subpart G of this part. For previously deferred UST systems described in subparts A and K of this part, this requirement applies after the effective dates described in § 280.10(a)(1)(ii) and (iii) and § 280.251(a).

§ 280.41 Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

(a) *Tanks.* Tanks must be monitored for releases as follows:

(1) Tanks installed on or before [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must be monitored for releases at least every 30 days using one of the methods listed in § 280.43(d) through (i) except that:

(i) UST systems that meet the performance standards in § 280.20 or § 280.21, and the monthly inventory control requirements in § 280.43(a) or (b), may use tank tightness testing (conducted in accordance with § 280.43(c)) at least every 5 years until 10 years after the tank was installed; and

(ii) Tanks with capacity of 550 gallons or less and tanks with a capacity of 551 to 1,000 gallons that meet the tank diameter criteria in § 280.43(b) may use manual tank gauging (conducted in accordance with § 280.43(b)).

(2) Tanks installed after [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must be monitored for releases at least every 30 days in accordance with § 280.43(g).

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

(1) Piping installed on or before [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet one of the following:

(i) *Pressurized piping*. Underground piping that conveys regulated substances under pressure must:

(A) Be equipped with an automatic line leak detector conducted in accordance with § 280.44(a); and

(B) Have an annual line tightness test conducted in accordance with § 280.44(b) or have monthly monitoring conducted in accordance with § 280.44(c).

(ii) *Suction piping*. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with § 280.44(b), or use a monthly monitoring method conducted in accordance with § 280.44(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

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

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

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

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

(E) A method is provided that allows compliance with paragraphs (b)(1)(ii)(B) through (D) of this section to be readily determined.

(2) Piping installed or replaced after [INSERT DATE 270 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet one of the following:

(i) Pressurized piping must be monitored for releases at least every 30 days in accordance with § 280.43(g) and be equipped with an automatic line leak detector in accordance with § 280.44(a)

(ii) Suction piping must be monitored for releases at least every 30 days in accordance with § 280.43(g). No release detection is required for suction piping that meets paragraphs (b)(1)(ii)(A) through (E) of this section.

§ 280.42 Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems must provide containment that meets the following requirements and monitor these systems using § 280.43(g) at least every 30 days:

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

(1) Contain regulated substances leaked from the primary containment until they are detected and removed;

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

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

Note to paragraph (a). The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements for tanks installed on or before

[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Double walled tanks must be designed, constructed, and installed to:

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

(2) Detect the failure of the inner wall.

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

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

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

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

(d) Underground piping must be equipped with secondary containment that satisfies the requirements of this section (e.g., trench liners, double walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with § 280.44(a).

(e) For hazardous substance UST systems installed on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] other methods of release detection may be used if owners and operators:

(1) Demonstrate to the implementing agency that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in § 280.43(b) through (i) can detect a release of petroleum;

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

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

§ 280.43 Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of § 280.41 must be conducted in accordance with the following:

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

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

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

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

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

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

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

Note to paragraph (a). Practices described in the American Petroleum Institute Recommended Practice RP 1621, "Bulk Liquid Stock Control at Retail Outlets" may be used, where applicable, as guidance in meeting the requirements of this paragraph (a).

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

(1) Tank liquid level measurements are taken at the beginning and ending of a period using the appropriate minimum duration of test value in the table below during which no liquid is added to or removed from the tank;

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

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

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

Nominal Tank Capacity	**Minimum Duration Of Test**	**Weekly Standard (One Test)**	**Monthly Standard (Four Test Average)**
550 gallons or less	36 hours	10 gallons	5 gallons
551-1,000 gallons (when tank diameter is 64 inches)	44 hours	9 gallons	4 gallons
551-1,000 gallons (when tank diameter is 48 inches)	58 hours	12 gallons	6 gallons
551-1,000 gallons	36 hours	13 gallons	7 gallons

(also requires periodic tank tightness testing)			
1,001-2,000 gallons (also requires periodic tank tightness testing)	36 hours	26 gallons	13 gallons

(5) Tanks of 550 gallons or less nominal capacity and tanks with a nominal capacity of 551 to 1,000 gallons that meet the tank diameter criteria in the table in paragraph (b)(4) of this section may use this as the sole method of release detection. All other tanks with a nominal capacity of 551 to 2,000 gallons may use the method in place of inventory control in § 280.43(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this subpart.

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

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

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

(2) The automatic tank gauging equipment must meet the inventory control (or other test of equivalent performance) requirements of § 280.43(a); and

(3) The test must be performed with the system operating in one of the following modes:

(i) In-tank static testing conducted at least once every 30 days; or

(ii) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(h) *Statistical inventory reconciliation*. Release detection methods based on the application of statistical principles to inventory data similar to those described in § 280.43(a) must meet the following requirements:

(1) Report a quantitative result with a calculated leak rate;

(2) Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within 30 days; and

(3) Use a threshold that does not exceed one-half the minimum detectible leak rate.

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

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

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

§ 280.44 Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of § 280.41 must be conducted in accordance with the following:

(a) *Automatic line leak detectors.* Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping 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 must be conducted in accordance with § 280.40(a)(3).

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

(c) *Applicable tank methods.* Except as described in § 280.41(a), any of the methods in § 280.43(e) through (i) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

§ 280.45 Release detection recordkeeping.

All UST system owners and operators must maintain records in accordance with § 280.34 demonstrating compliance with all applicable requirements of this subpart. These records must include the following:

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

the implementing agency, from the date of installation. Not later than October 13, 2018, records of site assessments required under § 280.43(e)(6) and (f)(7) must be maintained for as long as the methods are used. Records of site assessments developed after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must be signed by a professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the implementing agency;

(b) The results of any sampling, testing, or monitoring must be maintained for at least one year, or for another reasonable period of time determined by the implementing agency, except as follows:

(1) The results of annual operation tests conducted in accordance with § 280.40(a)(3) must be maintained for three years. At a minimum, the results must list each component tested, indicate whether each component tested meets criteria in § 280.40(a)(3) or needs to have action taken, and describe any action taken to correct an issue; and

(2) The results of tank tightness testing conducted in accordance with § 280.43(c) must be retained until the next test is conducted; and

(3) The results of tank tightness testing, line tightness testing, and vapor monitoring using a tracer compound placed in the tank system conducted in accordance with § 280.252(d) must be retained until the next test is conducted; and

(c) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the implementing agency. Any schedules of required calibration and maintenance provided by the

release detection equipment manufacturer must be retained for five years from the date of installation.

Subpart E -- Release Reporting, Investigation, and Confirmation

§ 280.50 Reporting of suspected releases.

Owners and operators of UST systems must report to the implementing agency within 24 hours, or another reasonable period specified by the implementing agency, and follow the procedures in § 280.52 for any of the following conditions:

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

(b) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless:

(1) The system equipment or component is found not to be releasing regulated substances to the environment;

(2) Any defective system equipment or component is immediately repaired or replaced; and

(3) For secondarily contained systems, except as provided for in § 280.43(g)(2)(iv), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.

(c) Monitoring results, including investigation of an alarm, from a release detection method required under §§ 280.41and 280.42 that indicate a release may have occurred unless:

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

(2) The leak is contained in the secondary containment and:

(i) Except as provided for in § 280.43(g)(2)(iv), any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed; and

(ii) Any defective system equipment or component is immediately repaired or replaced;

(3) In the case of inventory control described in § 280.43(a), a second month of data does not confirm the initial result or the investigation determines no release has occurred; or

(4) The alarm was investigated and determined to be a non-release event (for example, from a power surge or caused by filling the tank during release detection testing).

§ 280.51 Investigation due to off-site impacts.

When required by the implementing agency, owners and operators of UST systems must follow the procedures in § 280.52 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and

drinking waters) that has been observed by the implementing agency or brought to its attention by another party.

§ 280.52 Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with subpart F, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under § 280.50 within 7 days, or another reasonable time period specified by the implementing agency, using either the following steps or another procedure approved by the implementing agency:

(a) *System test*. Owners and operators must conduct tests (according to the requirements for tightness testing in §§ 280.43(c) and 280.44(b) or, as appropriate, secondary containment testing described in § 280.33(d)).

(1) The test must determine whether:

(i) A leak exists in that portion of the tank that routinely contains product, or the attached delivery piping; or

(ii) A breach of either wall of the secondary containment has occurred.

(2) If the system test confirms a leak into the interstice or a release, owners and operators must repair, replace, upgrade, or close the UST system. In addition, owners and operators must begin corrective action in accordance with subpart F of this part if the test results for the system, tank, or delivery piping indicate that a release exists.

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

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

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

(1) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with subpart F of this part;

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

§ 280.53 Reporting and cleanup of spills and overfills.

(a) Owners and operators of UST systems must contain and immediately clean up a spill or overfill and report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and begin corrective action in accordance with subpart F of this part in the following cases:

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

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

Note to paragraph (a). Pursuant to §§ 302.6 and 355.40 of this chapter, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.

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

Subpart F -- Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

§ 280.60 General.

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart except for USTs excluded under § 280.10(b) and UST systems subject to RCRA Subtitle C corrective action requirements under section 3004(u) of the Resource Conservation and Recovery Act, as amended.

§ 280.61 Initial response.

Upon confirmation of a release in accordance with § 280.52 or after a release from the UST system is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the implementing agency:

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

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

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

§ 280.62 Initial abatement measures and site check.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must perform the following abatement measures:

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

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

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

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

(5) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by § 280.52(b) or the closure site assessment of § 280.72(a). In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to groundwater and other factors as appropriate for identifying the presence and source of the release; and

(6) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with § 280.64.

(b) Within 20 days after release confirmation, or within another reasonable period of time determined by the implementing agency, owners and operators must submit a report to the implementing agency summarizing the initial abatement steps taken under paragraph (a) of this section and any resulting information or data.

§ 280.63 Initial site characterization.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in §§ 280.60 and 280.61. This information must include, but is not necessarily limited to the following:

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

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

(3) Results of the site check required under § 280.62(a)(5); and

(4) Results of the free product investigations required under § 280.62(a)(6), to be used by owners and operators to determine whether free product must be recovered under § 280.64.

(b) Within 45 days of release confirmation or another reasonable period of time determined by the implementing agency, owners and operators must submit the information collected in compliance with paragraph (a) of this section to the implementing agency in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the implementing agency.

§ 280.64 Free product removal.

At sites where investigations under § 280.62(a)(6) indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions initiated under §§ 280.61 through 280.63, or preparing for actions required under §§ 280.65 through 280.66. In meeting the requirements of this section, owners and operators must:

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

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

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

(d) Unless directed to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(1) The name of the person(s) responsible for implementing the free product removal measures;

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

(3) The type of free product recovery system used;

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

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

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

(7) The disposition of the recovered free product.

§ 280.65 Investigations for soil and groundwater cleanup.

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

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

(2) Free product is found to need recovery in compliance with § 280.64;

(3) There is evidence that contaminated soils may be in contact with groundwater (e.g., as found during conduct of the initial response measures or investigations required under §§ 280.60 through 280.64); and

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

(b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.

§ 280.66 Corrective action plan.

(a) At any point after reviewing the information submitted in compliance with §§ 280.61 through 280.63, the implementing agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the implementing agency. Alternatively, owners and operators may, after fulfilling the requirements of §§ 280.61 through 280.63, choose to submit a corrective action plan for responding to contaminated soil and groundwater. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the implementing agency, and must modify their plan as necessary to meet this standard.

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

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

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

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

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

(5) An exposure assessment; and

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

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

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

(1) Notify the implementing agency of their intention to begin cleanup;

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

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

§ 280.67 Public participation.

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

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

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

(d) The implementing agency must give public notice that complies with paragraph (a) of this section if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the implementing agency.

Subpart G -- Out-of-Service UST Systems and Closure

§ 280.70 Temporary closure.

(a) When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with § 280.31, and any release detection in accordance with subparts D and K of this part. Subparts E and F of this part must be complied with if a release is suspected or confirmed. However, release detection and release detection operation and maintenance testing and inspections in subparts C and D of this part are not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system. In addition, spill and overfill operation and maintenance testing and inspections in subpart C of this part are not required.

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

(1) Leave vent lines open and functioning; and

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

(c) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in § 280.20 for new UST systems or the upgrading requirements in § 280.21, *except that* the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in

accordance with §§ 280.71 through 280.74, *unless* the implementing agency provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with § 280.72 before such an extension can be applied for.

§ 280.71 Permanent closure and changes-in-service.

(a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the implementing agency, owners and operators must notify the implementing agency of their intent to permanently close or make the change-in-service, *unless* such action is in response to corrective action. The required assessment of the excavation zone under § 280.72 must be performed after notifying the implementing agency but before completion of the permanent closure or a change-in-service.

(b) To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must: be removed from the ground, filled with an inert solid material, or closed in place in a manner approved by the implementing agency.

(c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with § 280.72.

Note to § 280.71. The following cleaning and closure procedures may be used to comply with this section:

(A) American Petroleum Institute Recommended Practice RP 1604, "Closure of Underground Petroleum Storage Tanks";

(B) American Petroleum Institute Standard 2015, "Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry From Decommissioning Through Recommissioning";

(C) American Petroleum Institute Recommended Practice 2016, "Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks";

(D) American Petroleum Institute Recommended Practice RP 1631, "Interior Lining and Periodic Inspection of Underground Storage Tanks," may be used as guidance for compliance with this section;

(E) National Fire Protection Association Standard 326, "Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair"; and

(F) National Institute for Occupational Safety and Health Publication 80-106, "Criteria for a Recommended Standard...Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

§ 280.72 Assessing the site at closure or change-in-service.

(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of

backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in § 280.43(e) and (f) is operating in accordance with the requirements in § 280.43 at the time of closure, and indicates no release has occurred.

(b) If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners and operators must begin corrective action in accordance with subpart F of this part.

§ 280.73 Applicability to previously closed UST systems.

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

§ 280.74 Closure records.

Owners and operators must maintain records in accordance with § 280.34 that are capable of demonstrating compliance with closure requirements under this subpart. The results of the excavation zone assessment required in § 280.72 must be maintained for at least three years after completion of permanent closure or change-in-service in one of the following ways:

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

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

(c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

Subpart H –- Financial Responsibility

§ 280.90 Applicability.

(a) This subpart applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in this section.

(b) Owners and operators of petroleum UST systems are subject to these requirements in accordance with § 280.91.

(c) State and Federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are exempt from the requirements of this subpart.

(d) The requirements of this subpart do not apply to owners and operators of any UST system described in § 280.10(b), (c)(1), (c)(3), or (c)(4).

(e) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance.

§ 280.91 Compliance dates.

Owners of petroleum underground storage tanks must comply with the requirements of this subpart. Previously deferred UST systems must comply with the requirements of this subpart according to the schedule in § 280.251(a).

§ 280.92 Definition of terms.

When used in this subpart, the following terms shall have the meanings given below:

Accidental release means any sudden or nonsudden release of petroleum arising from operating an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

Bodily injury shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

Chief Financial Officer, in the case of local government owners and operators, means the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the local government.

Controlling interest means direct ownership of at least 50 percent of the voting stock of another entity.

Director of the Implementing Agency means the EPA Regional Administrator, or, in the case of a state with a program approved under section 9004, the Director of the designated state or local agency responsible for carrying out an approved UST program.

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

(1) A 10-K report submitted to the SEC;

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

(3) Annual reports submitted to the Energy Information Administration or the Rural Utilities Service.

Note to the definition of *Financial reporting year*. "Financial reporting year" may thus comprise a fiscal or a calendar year period.

Legal defense cost is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought:

(1) By EPA or a state to require corrective action or to recover the costs of corrective action;

(2) By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

(3) By any person to enforce the terms of a financial assurance mechanism.

Local government shall have the meaning given this term by applicable state law and includes Indian tribes. The term is generally intended to include:

(1) Counties, municipalities, townships, separately chartered and operated special districts (including local government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by state charter or constitution; and

(2) Special districts and independent school districts established by counties, municipalities, townships, and other general purpose governments to provide essential services.

Occurrence means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank.

Note to the definition of *Occurrence*. This definition is intended to assist in the understanding of these regulations and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence."

Owner or operator, when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

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

Property damage shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

Provider of financial assurance means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in §§ 280.95 through 280.107, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.

Substantial business relationship means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

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

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

Termination under § 280.97(b)(1) and (2) means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

§ 280.93 Amount and scope of required financial responsibility.

(a) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

(1) For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year; $1 million.

(2) For all other owners or operators of petroleum underground storage tanks; $500,000.

(b) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

(1) For owners or operators of 1 to 100 petroleum underground storage tanks, $1 million; and

(2) For owners or operators of 101 or more petroleum underground storage tanks, $2 million.

(c) For the purposes of paragraphs (b) and (f) of this section, only, “a petroleum underground storage tank” means a single containment unit and does not mean combinations of single containment units.

(d) Except as provided in paragraph (e) of this section, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

(1) Taking corrective action;

(2) Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or

(3) Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in paragraphs (a) and (b) of this section.

(e) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

(f) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

(g) The amounts of assurance required under this section exclude legal defense costs.

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

§ 280.94 Allowable mechanisms and combinations of mechanisms.

(a) Subject to the limitations of paragraphs (b) and (c) of this section:

(1) An owner or operator, including a local government owner or operator, may use any one or combination of the mechanisms listed in §§ 280.95 through 280.103 to demonstrate financial responsibility under this subpart for one or more underground storage tanks; and

(2) A local government owner or operator may use any one or combination of the mechanisms listed in §§ 280.104 through 280.107 to demonstrate financial responsibility under this subpart for one or more underground storage tanks.

(b) An owner or operator may use a guarantee under § 280.96 or surety bond under § 280.98 to establish financial responsibility only if the Attorney(s) General of the state(s) in which the underground storage tanks are located has (have) submitted a written statement to the implementing agency that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in that state.

(c) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

§ 280.95 Financial test of self-insurance.

(a) An owner or operator, and/or guarantor, may satisfy the requirements of § 280.93 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, and/or guarantor must meet the criteria of paragraph (b) or (c) of this section based on year-end financial statements for the latest completed fiscal year.

(b)(1) The owner or operator, and/or guarantor, must have a tangible net worth of at least ten times:

(i) The total of the applicable aggregate amount required by § 280.93, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to EPA under this section or to a state implementing agency under a state program approved by EPA under 40 CFR part 281;

(ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 264.101, 264.143, 264.145, 265.143, 265.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 271; and

(iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 145.

(2) The owner or operator, and/or guarantor, must have a tangible net worth of at least $10 million.

(3) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer worded as specified in paragraph (d) of this section.

(4) The owner or operator, and/or guarantor, must either:

(i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Utilities Service; or

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

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

(c)(1) The owner or operator, and/or guarantor must meet the financial test requirements of 40 CFR 264.147(f)(1), substituting the appropriate amounts specified in § 280.93(b)(1) and (2) for the "amount of liability coverage" each time specified in that section.

(2) The fiscal year-end financial statements of the owner or operator, and/or guarantor, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.

(3) The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(4) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer, worded as specified in paragraph (d) of this section.

(5) If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Utilities Service, the owner or operator, and/or guarantor, must obtain a special report by an independent certified public accountant stating that:

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

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

(d) To demonstrate that it meets the financial test under paragraph (b) or (c) of this section, the chief financial officer of the owner or operator, or guarantor, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized State program by this [insert: "owner or operator," and/or "guarantor"]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test or a financial test under a State program approved under 40 CFR part 281. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each

tank assured by this financial test or a financial test under a State program authorized under 40 CFR part 281 by the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding State requirements.]

A [insert: "financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR parts 271 and 145:

EPA Regulations	Amount
Closure (§§ 264.143 and 265.143).....	$_____
Post-Closure Care (§§ 264.145 and 265.145).....	$_____
Liability Coverage (§§ 264.147 and 265.147)……..	$_____
Corrective Action (§ 264.101(b)).....	$_____
Plugging and Abandonment (§ 144.63).....	$_____
Closure.....	$_____
Post-Closure Care.....	$_____
Liability Coverage.....	$_____
Corrective Action.....	$_____
Plugging and Abandonment.....	$_____
Total.....	$_____

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

[Fill in the information for Alternative I if the criteria of paragraph (b) of § 280.95 are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of paragraph (c) of § 280.95 are being used to demonstrate compliance with the financial test requirements.]

Alternative I

1.	Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee	$_____
2.	Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee	$_____
3.	Sum of lines 1 and 2	$_____
4.	Total tangible assets	$_____
5.	Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]	$_____
6.	Tangible net worth [subtract line 5 from line 4]	$_____
		Yes No

7. Is line 6 at least $10 million? ___ __

8. Is line 6 at least 10 times line 3? ___ __

9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission? ___ __

10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration? ___ __

11. Have financial statements for the latest fiscal year been filed with the Rural Utilities Service? ___ __

12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.] ___ __

Alternative II

1. Amount of annual UST aggregate coverage being assured by a test, and/or guarantee $_____

2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a $_____

financial test, and/or guarantee

3.	Sum of lines 1 and 2	$_____
4.	Total tangible assets	$_____
5.	Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6]	$_____
6.	Tangible net worth [subtract line 5 from line 4]	$_____
7.	Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.]	$_____
		Yes No
8.	Is line 6 at least $10 million?	___ __
9.	Is line 6 at least 6 times line 3?	___ __
10.	Are at least 90 percent of assets located in the U.S.? [If "No," complete line 11.]	___ __
11.	Is line 7 at least 6 times line 3?	___ __
	[Fill in either lines 12-15 or lines 16-18:]	
12.	Current assets	$_____
13.	Current liabilities	$_____
14.	Net working capital [subtract line 13 from line 12]	$_____
		Yes No
15.	Is line 14 at least 6 times line 3?	___ __
16.	Current bond rating of most recent bond issue	___ __

17. Name of rating service ___ __

18. Date of maturity of bond ___ __

19. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Utilities Service? ___ __

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.95(d) as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

(e) If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Director of the implementing agency may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Director finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the

financial test requirements of § 280.95(b) or (c) and (d), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(g) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Director of the implementing agency that he or she no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

§ 280.96 Guarantee.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be:

(1) A firm that:

(i) Possesses a controlling interest in the owner or operator;

(ii) Possesses a controlling interest in a firm described under paragraph (a)(1)(i) of this section; or,

(iii) Is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or,

(2) A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.

(b) Within 120 days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of § 280.95 based on year-end financial statements for the latest completed financial reporting year by completing the letter from the

chief financial officer described in § 280.95(d) and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Director of the implementing agency notifies the guarantor that he no longer meets the requirements of the financial test of § 280.95(b) or (c) and (d), the guarantor must notify the owner or operator within 10 days of receiving such notification from the Director. In both cases, the guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in § 280.114(e).

(c) The guarantee must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 40 CFR 280.95(b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in 40 CFR 280.96(b).

(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director], shall fund a

standby trust fund in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 40 CFR 280.95(b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

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

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

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

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

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.96(c) as such regulations were constituted on the effective date shown immediately below.

Effective date:_____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

_____

(d) An owner or operator who uses a guarantee to satisfy the requirements of § 280.93 must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Director of the implementing agency under § 280.112. This standby trust fund must meet the requirements specified in § 280.103.

§ 280.97 Insurance and risk retention group coverage.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(b) Each insurance policy must be amended by an endorsement worded as specified in paragraph (b)(1) of this section, or evidenced by a certificate of insurance worded as specified in paragraph (b)(2) of this section, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

(1) *Endorsement*.

Name: [name of each covered location]

_____

_____

Address: [address of each covered location]

_____

_____

Policy Number:_____

Period of Coverage: [current policy period]

_____

_____

Name of [Insurer or Risk Retention Group]:

_____

_____

Address of [Insurer or Risk Retention Group]:

_____

_____

Name of Insured:_____

Address of Insured:_____

_____

_____

Endorsement:

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

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.] for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each Occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a

separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

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

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

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95-280.102 and 280.104-280.107.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

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

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(1) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

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

[Name of person signing]

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

[Address of Representative]

(2) *Certificate of Insurance*.

Name: [name of each covered location]

_____

_____

Address: [address of each covered location]

_____

_____

Policy Number:_____

Endorsement (if applicable):_____

Period of Coverage: [current policy period]

_____

Name of [Insurer or Risk Retention Group]:

_____

_____

Address of [Insurer or Risk Retention Group]:

_____

_____

Name of Insured:_____

Address of Insured:

_____

_____

_____

Certification:

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

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement,

and the name and address of the facility.] for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph 1:

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

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95-280.102 and 280.104-280.107.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

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

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states"].

[Signature of authorized representative of Insurer]

[Type name]

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

Group]

[Address of Representative]

(c) Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

§ 280.98 Surety bond.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(b) The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed:_____

Period of coverage:_____

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

_____

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

_____

State of incorporation (if applicable):

_____

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

_____

Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" "arising from operating the underground storage Tank"].

Penal sums of bond:

Per occurrence $_____

Annual aggregate $_____

Surety's bond number:_____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to [the implementing agency], in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name

of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Subtitle I of the Solid Waste Disposal Act, as amended, to provide financial assurance for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with 40 CFR part 280, subpart F and the Director of the state implementing agency's instructions for," and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in 40 CFR part 280, subpart H, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

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

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

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

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

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

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

Upon notification by [the Director of the implementing agency] that the Principal has failed to ["take corrective action, in accordance with 40 CFR part 280, subpart F and the Director's instructions," and/or "compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform ["corrective action in accordance with 40 CFR part 280 and the Director's instructions," and/or "third-party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by [the Regional Administrator or the Director] under 40 CFR 280.112.

Upon notification by [the Director] that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that [the Director] has determined or suspects that a release has

occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by [the Director] under 40 CFR 280.112.

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

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

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

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

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

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 280.98(b) as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]

[Names(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name and address]

[State of Incorporation: _____]

[Liability limit: $_____]

[Signature(s)]

[Names(s) and title(s)]

[Corporate seal]

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

Bond premium: $_____

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

(d) The owner or operator who uses a surety bond to satisfy the requirements of § 280.93 must establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the Director under § 280.112. This standby trust fund must meet the requirements specified in § 280.103.

§ 280.99 Letter of credit.

(a) An owner or operator may satisfy the requirements of § 280.93 by obtaining an irrevocable standby letter of credit that conforms to the requirements of this section. The issuing institution must be an entity that has the authority to issue letters of credit in each state where used and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(b) The letter of credit must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

[Name and address of issuing institution]

[Name and address of Director(s) of state implementing agency(ies)]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars ($[insert dollar amount]), available upon presentation [insert, if more than one Director of a state implementing agency is a beneficiary, "by any one of you"] of

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

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of Subtitle I of the Solid Waste Disposal Act, as amended."

This letter of credit may be drawn on to cover [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] $[insert dollar amount] per occurrence and [in words] $[insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

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

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

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

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

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

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by [owner or operator], as shown on the signed return receipt.

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

We certify that the wording of this letter of credit is identical to the wording specified in 40 CFR 280.99(b) as such regulations were constituted on the date shown immediately below.

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

[Date]

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

(c) An owner or operator who uses a letter of credit to satisfy the requirements of § 280.93 must also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director of the

implementing agency will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director under § 280.112. This standby trust fund must meet the requirements specified in § 280.103.

(d) The letter of credit must be irrevocable with a term specified by the issuing institution. The letter of credit must provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

§ 280.100 Use of state-required mechanism.

(a) For underground storage tanks located in a state that does not have an approved program, and where the state requires owners or operators of underground storage tanks to demonstrate financial responsibility for taking corrective action and/or for compensating third parties for bodily injury and property damage, an owner or operator may use a state-required financial mechanism to meet the requirements of § 280.93 if the Regional Administrator determines that the state mechanism is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state-required mechanism principally in terms of: certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available;

and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state, an owner or operator, or any other interested party may submit to the Regional Administrator a written petition requesting that one or more of the state-required mechanisms be considered acceptable for meeting the requirements of § 280.93. The submission must include copies of the appropriate state statutory and regulatory requirements and must show the amount of funds for corrective action and/or for compensating third parties assured by the mechanism(s). The Regional Administrator may require the petitioner to submit additional information as is deemed necessary to make this determination.

(d) Any petition under this section may be submitted on behalf of all of the state's underground storage tank owners and operators.

(e) The Regional Administrator will notify the petitioner of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this subpart. Pending this determination, the owners and operators using such mechanisms will be deemed to be in compliance with the requirements of § 280.93 for underground storage tanks located in the state for the amounts and types of costs covered by such mechanisms.

§ 280.101 State fund or other state assurance.

(a) An owner or operator may satisfy the requirements of § 280.93 for underground storage tanks located in a state, where EPA is administering the requirements of this subpart, which assures that monies will be available from a state fund or state assurance program to cover costs up to the limits specified in § 280.93 or otherwise assures that such costs will be paid if the

Regional Administrator determines that the state's assurance is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state fund or other state assurance principally in terms of: Certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state must submit to the Regional Administrator a description of the state fund or other state assurance to be supplied as financial assurance, along with a list of the classes of underground storage tanks to which the funds may be applied. The Regional Administrator may require the state to submit additional information as is deemed necessary to make a determination regarding the acceptability of the state fund or other state assurance. Pending the determination by the Regional Administrator, the owner or operator of a covered class of USTs will be deemed to be in compliance with the requirements of § 280.93 for the amounts and types of costs covered by the state fund or other state assurance.

(d) The Regional Administrator will notify the state of his determination regarding the acceptability of the state's fund or other assurance in lieu of financial mechanisms specified in this subpart. Within 60 days after the Regional Administrator notifies a state that a state fund or other state assurance is acceptable, the state must provide to each owner or operator for which it is assuming financial responsibility a letter or certificate describing the nature of the state's assumption of responsibility. The letter or certificate from the state must include, or have attached to it, the following information: the facility's name and address and the amount of funds for corrective action and/or for compensating third parties that is assured by the state. The owner

or operator must maintain this letter or certificate on file as proof of financial responsibility in accordance with § 280.111(b)(8).

§ 280.102 Trust fund.

(a) An owner or operator may satisfy the requirements of § 280.93 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.

(b) The wording of the trust agreement must be identical to the wording specified in § 280.103(b)(1), and must be accompanied by a formal certification of acknowledgement as specified in § 280.103(b)(2).

(c) The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(d) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(e) If other financial assurance as specified in this subpart is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(f) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraph (d) or (e) of this section, the Director of the implementing agency

will instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

§ 280.103 Standby trust fund.

(a) An owner or operator using any one of the mechanisms authorized by §§ 280.96, 280.98, or 280.99 must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(b)(1) The standby trust agreement, or trust agreement, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

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

Whereas, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for

bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the [insert "standby" where trust agreement is standby trust agreement] trust agreement.

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

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

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

Section 1. Definitions

As used in this Agreement:

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

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

Section 2. Identification of the Financial Assurance Mechanism

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

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of [implementing agency]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to [the Director of the implementing agency's] instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by [the state implementing agency]

Section 4. Payment for ["Corrective Action" and/or "Third-Party Liability Claims"]

The Trustee shall make payments from the Fund as [the Director of the implementing agency] shall direct, in writing, to provide for the payment of the costs of [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental Releases" or "accidental releases"] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

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

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

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

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

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

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

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

Section 5. Payments Comprising the Fund

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

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill,

prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

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

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

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

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

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

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

Section 8. Express Powers of Trustee

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

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

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

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

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

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

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

Section 10. Advice of Counsel

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

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in

the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee

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

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination

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

Section 16. Immunity and Indemnification

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

Section 17. Choice of Law

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

Section 18. Interpretation

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

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 280.103(b)(1) as such regulations were constituted on the date written above.

[Signature of Grantor]

[Name of the Grantor]

[Title]

Attest:

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal]

[Signature of Witness]

[Name of the Witness]

[Title]

[Seal]

(2) The standby trust agreement, or trust agreement must be accompanied by a formal certification of acknowledgement similar to the following. State requirements may differ on the proper content of this acknowledgment.

State of_____

County of_____

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

[Signature of Notary Public]

[Name of Notary Public]

(c) The Director of the implementing agency will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Director determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

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

§ 280.104 Local government bond rating test.

(a) A general purpose local government owner or operator and/or local government serving as a guarantor may satisfy the requirements of § 280.93 by having a currently outstanding issue or issues of general obligation bonds of $1 million or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where a local government has multiple outstanding issues, or where a local

government's bonds are rated by both Moody's and Standard and Poor's, the lowest rating must be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance may not be considered in determining the amount of applicable bonds outstanding.

(b) A local government owner or operator or local government serving as a guarantor that is not a general-purpose local government and does not have the legal authority to issue general obligation bonds may satisfy the requirements of § 280.93 by having a currently outstanding issue or issues of revenue bonds of $1 million or more, excluding refunded issues, and by also having a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the local government. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond must be used to determine eligibility. Bonds that are backed by credit enhancement may not be considered in determining the amount of applicable bonds outstanding.

(c) The local government owner or operator and/or guarantor must maintain a copy of its bond rating published within the last 12 months by Moody's or Standard & Poor's.

(d) To demonstrate that it meets the local government bond rating test, the chief financial officer of a general purpose local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate

financial responsibility for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage”] caused by [insert: “sudden accidental releases” or “nonsudden accidental releases” or “accidental releases”] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

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

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

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody’s or Standard & Poor’s]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody’s or Standard & Poor’s are rated as at least investment grade (Moody’s Baa or Standard & Poor’s BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.104(d) as such regulations were constituted on the date shown immediately below.

[Date]_____

[Signature]_____

[Name]_____

[Title]_____

(e) To demonstrate that it meets the local government bond rating test, the chief financial officer of local government owner or operator and/or guarantor other than a general purpose government must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s). This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

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

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

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.104(e) as such regulations were constituted on the date shown immediately below.

[Date]_____

[Signature]_____

[Name]_____

[Title]_____

(f) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator, and/or local government guarantor. If the Director finds, on the basis of such reports or other information, that the local government owner or operator, and/or guarantor, no longer meets the local government bond rating test requirements of § 280.104, the local government owner or operator must obtain alternative coverage within 30 days after notification of such a finding.

(g) If a local government owner or operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the local government owner or operator must obtain alternative coverage within 150 days of the change in status.

(h) If the local government owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the bond rating test or within 30 days of notification by the Director of the implementing agency that it no longer meets the requirements of the bond rating test, the owner or operator must notify the Director of such failure within 10 days.

§ 280.105 Local government financial test.

(a) A local government owner or operator may satisfy the requirements of § 280.93 by passing the financial test specified in this section. To be eligible to use the financial test, the local government owner or operator must have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the local government financial test, the owner or operator must meet the criteria of paragraphs (b)(2) and (3) of this section based on year-end financial statements for the latest completed fiscal year.

(b)(1) The local government owner or operator must have the following information available, as shown in the year-end financial statements for the latest completed fiscal year:

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

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

(iii) *Local revenues*. Consists of total revenues (as defined in paragraph (b)(1)(i) of this section) minus the sum of all transfers from other governmental entities, including all monies received from Federal, state, or local government sources.

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

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

(vi) Population consists of the number of people in the area served by the local government.

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

(3) The local government owner or operator must have a letter signed by the chief financial officer worded as specified in paragraph (c) of this section.

(c) To demonstrate that it meets the financial test under paragraph (b) of this section, the chief financial officer of the local government owner or operator, must sign, within 120 days of

the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [an] underground storage tank[s].

Underground storage tanks at the following facilities are assured by this financial test [List for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding state requirements.]

This owner or operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both

firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

Worksheet for Municipal Financial Test

Part I: Basic Information

1. Total Revenues

a. Revenues (dollars) _____

Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.

b. Subtract interfund transfers (dollars) _____

c. Total Revenues (dollars) _____

2. Total Expenditures

a. Expenditures (dollars) _____

Value consists of the sum of general fund operating and non-operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.

b. Subtract interfund transfers (dollars) _____

c. Total Expenditures (dollars) _____

3. Local Revenues

a. Total Revenues (from 1c) (dollars) _____

b. Subtract total intergovernmental transfers (dollars) _____

c. Local Revenues (dollars) _____

4. Debt Service

a. Interest and fiscal charges (dollars) _____

b. Add debt retirement (dollars) _____

c. Total Debt Service (dollars) _____

5. Total Funds (Dollars) _____

(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)

6. Population (Persons) _____

Part II: Application of Test

7. Total Revenues to Population

a. Total Revenues (from 1c) _____

b. Population (from 6) _____

c. Divide 7a by 7b _____

d. Subtract 417_____

e. Divide by 5,212 _____

f. Multiply by 4.095 _____

8. Total Expenses to Population

a. Total Expenses (from 2c) _____

b. Population (from 6) _____

c. Divide 8a by 8b _____

d. Subtract 524 _____

e. Divide by 5,401_____

f. Multiply by 4.095 _____

9. Local Revenues to Total Revenues

a. Local Revenues (from 3c) _____

b. Total Revenues (from 1c) _____

c. Divide 9a by 9b _____

d. Subtract .695 _____

e. Divide by .205 _____

f. Multiply by 2.840 _____

10. Debt Service to Population

a. Debt Service (from 4c) _____

b. Population (from 6) _____

c. Divide 10a by 10b _____

d. Subtract 51 _____

e. Divide by 1,038 _____

f. Multiply by -1.866 _____

11. Debt Service to Total Revenues

a. Debt Service (from 4c) _____

b. Total Revenues (from 1c) _____

c. Divide 11a by 11b _____

d. Subtract .068 _____

e. Divide by .259 _____

f. Multiply by -3.533 _____

12. Total Revenues to Total Expenses

a. Total Revenues (from 1c) _____

b. Total Expenses (from 2c) _____

c. Divide 12a by 12b _____

d. Subtract .910 _____

e. Divide by .899 _____

f. Multiply by 3.458 _____

13. Funds Balance to Total Revenues

a. Total Funds (from 5) _____

b. Total Revenues (from 1c) _____

c. Divide 13a by 13b _____

d. Subtract .891 _____

e. Divide by 9.156 _____

f. Multiply by 3.270 _____

14. Funds Balance to Total Expenses

a. Total Funds (from 5) _____

b. Total Expenses (from 2c) _____

c. Divide 14a by 14b _____

d. Subtract .866 _____

e. Divide by 6.409 _____

f. Multiply by 3.270 _____

15. Total Funds to Population _____

a. Total Funds (from 5) _____

b. Population (from 6) _____

c. Divide 15a by 15b _____

d. Subtract 270 _____

e. Divide by 4,548 _____

f. Multiply by 1.866 _____

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937 _____

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in 40 CFR 280.105(c) as such regulations were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

(d) If a local government owner or operator using the test to provide financial assurance finds that it no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(e) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator. If the Director finds, on the basis of such reports or other information, that the local government owner or operator no longer meets the

financial test requirements of § 280.105(b) and (c), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(f) If the local government owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the financial test based on the year-end financial statements or within 30 days of notification by the Director of the implementing agency that it no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

§ 280.106 Local government guarantee.

(a) A local government owner or operator may satisfy the requirements of § 280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be either the state in which the local government owner or operator is located or a local government having a "substantial governmental relationship" with the owner and operator and issuing the guarantee as an act incident to that relationship. A local government acting as the guarantor must:

(1) Demonstrate that it meets the bond rating test requirement of § 280.104 and deliver a copy of the chief financial officer's letter as contained in § 280.104(d) and (e) to the local government owner or operator; or

(2) Demonstrate that it meets the worksheet test requirements of § 280.105 and deliver a copy of the chief financial officer's letter as contained in § 280.105(c) to the local government owner or operator; or

(3) Demonstrate that it meets the local government fund requirements of § 280.107(a), (b), or (c) and deliver a copy of the chief financial officer's letter as contained in § 280.107 to the local government owner or operator.

(b) If the local government guarantor is unable to demonstrate financial assurance under any of §§ 280.104, 280.105, or 280.107(a), (b), or (c), at the end of the financial reporting year, the guarantor shall send by certified mail, before cancellation or non-renewal of the guarantee, notice to the owner or operator. The guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in § 280.114(e).

(c) The guarantee agreement must be worded as specified in paragraph (d) or (e) of this section, depending on which of the following alternative guarantee arrangements is selected:

(1) If, in the default or incapacity of the owner or operator, the guarantor guarantees to fund a standby trust as directed by the Director of the implementing agency, the guarantee shall be worded as specified in paragraph (d) of this section.

(2) If, in the default or incapacity of the owner or operator, the guarantor guarantees to make payments as directed by the Director of the implementing agency for taking corrective action or compensating third parties for bodily injury and property damage, the guarantee shall be worded as specified in paragraph (e) of this section.

(d) If the guarantor is a state, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee With Standby Trust Made by a State

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground

storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above identified tank(s), except that guarantor may cancel this

guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

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

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

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

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

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

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator],

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date:_____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

If the guarantor is a local government, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee With Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR 280.104, the local government financial test requirements of 40 CFR 280.105, or the local government fund under 40 CFR 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR part 280 or the

corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental Releases" or "nonsudden accidental releases" or "accidental Releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"]

accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

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

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

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

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

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date:_____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

_____

(e) If the guarantor is a state, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a State

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground

storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

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

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

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

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

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

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date:_____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

If the guarantor is a local government, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR 280.104, the local government financial test requirements of 40 CFR 280.105, the local government fund under 40 CFR 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

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

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

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

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

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator],

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date:_____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

§ 280.107 Local government fund.

A local government owner or operator may satisfy the requirements of § 280.93 by establishing a dedicated fund account that conforms to the requirements of this section. Except as specified in paragraph (b) of this section, a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

(a) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks and is funded for the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage; or

(b) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, and is funded for five times the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage. If the fund is funded for less than five times the amount of coverage required under § 280.93, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund; or

(c) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of

petroleum underground storage tanks. A payment is made to the fund once every year for seven years until the fund is fully-funded. This seven year period is hereafter referred to as the "pay-in-period." The amount of each payment must be determined by this formula:

$$\frac{TF - CF}{Y}$$

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

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

(2) The local government owner or operator has a letter signed by the appropriate state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter must also state that prior voter approval is not necessary before use of the bonding authority.

(d) To demonstrate that it meets the requirements of the local government fund, the chief financial officer of the local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this local government fund mechanism: [List for each facility: the name and address of the facility where tanks are assured by the local government fund].

[Insert: "The local government fund is funded for the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage." or "The local government fund is funded for five times the full amount of coverage required under § 280.93, or funded for part of the required amount of coverage and used in combination with other mechanisms(s) that provide the remaining coverage," or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name of local government owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established

by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the local government fund are as follows:

Amount in Fund (market value of fund at close of last fiscal year):_____

[If fund balance is incrementally funded as specified in § 280.107(c), insert:

Amount added to fund in the most recently completed fiscal year:_____

Number of years remaining in the pay-in-period: _____]

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.107(d) as such regulations were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

§ 280.108 Substitution of financial assurance mechanisms by owner or operator.

(a) An owner or operator may substitute any alternate financial assurance mechanisms as specified in this subpart, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of § 280.93.

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

§ 280.109 Cancellation or nonrenewal by a provider of financial assurance.

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

(1) Termination of a local government guarantee, a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) Termination of insurance or risk retention coverage, except for non-payment or misrepresentation by the insured, or state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of 10 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(b) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in § 280.114, the owner or operator must obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice

of termination, the owner or operator must notify the Director of the implementing agency of such failure and submit:

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

(2) The effective date of termination; and

(3) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with § 280.111(b).

§ 280.110 Reporting by owner or operator.

(a) An owner or operator must submit the appropriate forms listed in § 280.111(b) documenting current evidence of financial responsibility to the Director of the implementing agency:

(1) Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under § 280.53 or § 280.61;

(2) If the owner or operator fails to obtain alternate coverage as required by this subpart, within 30 days after the owner or operator receives notice of:

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

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

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

(iv) Other incapacity of a provider of financial assurance; or

(3) As required by §§ 280.95(g) and 280.109(b).

(b) An owner or operator must certify compliance with the financial responsibility requirements of this part as specified in the new tank notification form when notifying the appropriate state or local agency of the installation of a new underground storage tank under § 280.22.

(c) The Director of the Implementing Agency may require an owner or operator to submit evidence of financial assurance as described in § 280.111(b) or other information relevant to compliance with this subpart at any time.

§ 280.111 Recordkeeping.

(a) Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this subpart for an underground storage tank until released from the requirements of this subpart under § 208.113. An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of work. Records maintained off-site must be made available upon request of the implementing agency.

(b) An owner or operator must maintain the following types of evidence of financial responsibility:

(1) An owner or operator using an assurance mechanism specified in §§ 280.95 through 280.100 or § 280.102 or §§ 280.104 through 280.107 must maintain a copy of the instrument worded as specified.

(2) An owner or operator using a financial test or guarantee, or a local government financial test or a local government guarantee supported by the local government financial test must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.

(3) An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(4) A local government owner or operator using a local government guarantee under § 280.106(d) must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(5) A local government owner or operator using the local government bond rating test under § 280.104 must maintain a copy of its bond rating published within the last twelve months by Moody's or Standard & Poor's.

(6) A local government owner or operator using the local government guarantee under § 280.106, where the guarantor's demonstration of financial responsibility relies on the bond rating test under § 280.104 must maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard & Poor's.

(7) An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

(8) An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the state under § 280.101(d).

(9) An owner or operator using a local government fund under § 280.107 must maintain the following documents:

(i) A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund; and

(ii) Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under § 280.107(c) using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund.

(iii) If the fund is established under § 280.107(c) using incremental funding backed by bonding authority, the owner or operator must also maintain documentation of the required bonding authority, including either the results of a voter referendum (under § 280.107(c)(1)), or attestation by the State Attorney General as specified under § 280.107(c)(2).

(10) A local government owner or operator using the local government guarantee supported by the local government fund must maintain a copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund.

(11)(i) An owner or operator using an assurance mechanism specified in §§ 280.95 through 280.107 must maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

[Owner or operator] hereby certifies that it is in compliance with the requirements of subpart H of 40 CFR part 280.

The financial assurance mechanism(s) used to demonstrate financial responsibility under subpart H of 40 CFR part 280 is (are) as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period
of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]

[Name of owner or operator]

[Title]

[Date]

[Signature of witness or notary]

[Name of witness or notary]

[Date]

(ii) The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

§ 280.112 Drawing on financial assurance mechanisms.

(a) Except as specified in paragraph (d) of this section, the Director of the implementing agency shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Director, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

(1)(i) The owner or operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The Director determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Director pursuant to subparts E or F of a release from an underground storage tank covered by the mechanism; or

(2) The conditions of paragraph (b)(1) or (b)(2)(i) or (ii) of this section are satisfied.

(b) The Director of the implementing agency may draw on a standby trust fund when:

(1) The Director makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under subpart F of this part; or

(2) The Director has received either:

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

Certification of Valid Claim

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

[Signatures]

Owner or Operator

Attorney for Owner or Operator

(Notary)

Date

[Signatures]

Claimant(s)

Attorney(s) for Claimant(s)

(Notary)

Date

or

(ii) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under this subpart and the Director determines that the owner or operator has not satisfied the judgment.

(c) If the Director of the implementing agency determines that the amount of corrective action costs and third-party liability claims eligible for payment under paragraph (b) of this

section may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Director shall pay third-party liability claims in the order in which the Director receives certifications under paragraph (b)(2)(i) of this section, and valid court orders under paragraph (b)(2)(ii) of this section.

(d) A governmental entity acting as guarantor under § 280.106(e), the local government guarantee without standby trust, shall make payments as directed by the Director under the circumstances described in § 280.112(a), (b), and (c).

§ 280.113 Release from the requirements.

An owner or operator is no longer required to maintain financial responsibility under this subpart for an underground storage tank after the tank has been permanently closed or undergoes a change-in-service or, if corrective action is required, after corrective action has been completed and the tank has been permanently closed or undergoes a change-in-service as required by subpart G of this part.

§ 280.114 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

(a) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator

must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in § 280.111(b) documenting current financial responsibility.

(b) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in § 280.96.

(c) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a local government owner or operator as debtor, the local government owner or operator must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in § 280.111(b) documenting current financial responsibility.

(d) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor must notify the local government owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in § 280.106.

(e) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this

subpart within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he must notify the Director of the implementing agency.

(f) Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

§ 280.115 Replenishment of guarantees, letters of credit, or surety bonds.

(a) If at any time after a standby trust is funded upon the instruction of the Director of the implementing agency with funds drawn from a guarantee, local government guarantee with standby trust, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

(1) Replenish the value of financial assurance to equal the full amount of coverage required; or

(2) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(b) For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by § 280.93. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

§ 280.116 Suspension of enforcement. [Reserved]

Subpart I – Lender Liability

§280.200 Definitions.

(a) UST technical standards, as used in this subpart, refers to the UST preventative and operating requirements under subparts B, C, D, G, J, and K of this part and § 280.50

(b) *Petroleum production, refining, and marketing.* (1) *Petroleum production* means the production of crude oil or other forms of petroleum (as defined in §280.12) as well as the production of petroleum products from purchased materials.

(2) *Petroleum refining* means the cracking, distillation, separation, conversion, upgrading, and finishing of refined petroleum or petroleum products.

(3) *Petroleum marketing* means the distribution, transfer, or sale of petroleum or petroleum products for wholesale or retail purposes.

(c) *Indicia of ownership* means evidence of a secured interest, evidence of an interest in a security interest, or evidence of an interest in real or personal property securing a loan or other obligation, including any legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. Evidence of such interests include, but are not limited to, mortgages, deeds of trust, liens, surety bonds and guarantees of obligations, title held pursuant to a lease financing transaction in which the lessor does not select initially the leased property (hereinafter "lease financing transaction"), and legal or equitable title obtained pursuant to foreclosure. Evidence of such interests also includes assignments, pledges, or other rights to or

other forms of encumbrance against property that are held primarily to protect a security interest. A person is not required to hold title or a security interest in order to maintain indicia of ownership.

(d) *A holder* is a person who, upon the effective date of this regulation or in the future, maintains indicia of ownership (as defined in §280.200(c)) primarily to protect a security interest (as defined in §280.200(f)(1)) in a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located. A holder includes the initial holder (such as a loan originator); any subsequent holder (such as a successor-in-interest or subsequent purchaser of the security interest on the secondary market); a guarantor of an obligation, surety, or any other person who holds ownership indicia primarily to protect a security interest; or a receiver or other person who acts on behalf or for the benefit of a holder.

(e) *A borrower, debtor, or obligor* is a person whose UST or UST system or facility or property on which the UST or UST system is located is encumbered by a security interest. These terms may be used interchangeably.

(f) *Primarily to protect a security interest* means that the holder's indicia of ownership are held primarily for the purpose of securing payment or performance of an obligation.

(1) *Security interest* means an interest in a petroleum UST or UST system or in the facility or property on which a petroleum UST or UST system is located, created or established for the purpose of securing a loan or other obligation. Security interests include but are not limited to mortgages, deeds of trusts, liens, and title pursuant to lease financing transactions. Security interests may also arise from transactions such as sale and leasebacks, conditional sales, installment sales, trust receipt transactions, certain assignments, factoring agreements, accounts receivable financing arrangements, and consignments, if the transaction creates or establishes an

interest in an UST or UST system or in the facility or property on which the UST or UST system is located, for the purpose of securing a loan or other obligation.

(2) *Primarily to protect a security interest,* as used in this subpart, does not include indicia of ownership held primarily for investment purposes, nor ownership indicia held primarily for purposes other than as protection for a security interest. A holder may have other, secondary reasons for maintaining indicia of ownership, but the primary reason why any ownership indicia are held must be as protection for a security interest.

(g) *Operation* means, for purposes of this subpart, the use, storage, filling, or dispensing of petroleum contained in an UST or UST system.

§280.210 Participation in management.

The term "participating in the management of an UST or UST system" means that, subsequent to the effective date of this subpart, December 6, 1995, the holder is engaging in decisionmaking control of, or activities related to, operation of the UST or UST system, as defined herein.

(a) *Actions that are participation in management*. (1) Participation in the management of an UST or UST system means, for purposes of this subpart, actual participation by the holder in the management or control of decisionmaking related to the operation of an UST or UST system. Participation in management does not include the mere capacity or ability to influence or the unexercised right to control UST or UST system operations. A holder is participating in the management of the UST or UST system only if the holder either:

(i) Exercises decisionmaking control over the operational (as opposed to financial or administrative) aspects of the UST or UST system, such that the holder has undertaken responsibility for all or substantially all of the management of the UST or UST system; or

(ii) Exercises control at a level comparable to that of a manager of the borrower's enterprise, such that the holder has assumed or manifested responsibility for the overall management of the enterprise encompassing the day-to-day decisionmaking of the enterprise with respect to all, or substantially all, of the operational (as opposed to financial or administrative) aspects of the enterprise.

(2) Operational aspects of the enterprise relate to the use, storage, filling, or dispensing of petroleum contained in an UST or UST system, and include functions such as that of a facility or plant manager, operations manager, chief operating officer, or chief executive officer. Financial or administrative aspects include functions such as that of a credit manager, accounts payable/receivable manager, personnel manager, controller, chief financial officer, or similar functions. Operational aspects of the enterprise do not include the financial or administrative aspects of the enterprise, or actions associated with environmental compliance, or actions undertaken voluntarily to protect the environment in accordance with applicable requirements in this part or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281.

(b) *Actions that are not participation in management pre-foreclosure*. (1) *Actions at the inception of the loan or other transaction*. No act or omission prior to the time that indicia of ownership are held primarily to protect a security interest constitutes evidence of participation in management within the meaning of this subpart. A prospective holder who undertakes or requires an environmental investigation (which could include a site assessment, inspection,

and/or audit) of the UST or UST system or facility or property on which the UST or UST system is located (in which indicia of ownership are to be held), or requires a prospective borrower to clean up contamination from the UST or UST system or to comply or come into compliance (whether prior or subsequent to the time that indicia of ownership are held primarily to protect a security interest) with any applicable law or regulation, is not by such action considered to be participating in the management of the UST or UST system or facility or property on which the UST or UST system is located.

(2) *Loan policing and work out*. Actions that are consistent with holding ownership indicia primarily to protect a security interest do not constitute participation in management for purposes of this subpart. The authority for the holder to take such actions may, but need not, be contained in contractual or other documents specifying requirements for financial, environmental, and other warranties, covenants, conditions, representations or promises from the borrower. Loan policing and work out activities cover and include all such activities up to foreclosure, exclusive of any activities that constitute participation in management.

(i) *Policing the security interest or loan*. (A) A holder who engages in policing activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the UST or UST system as provided in §280.210(a). Such policing actions include, but are not limited to, requiring the borrower to clean up contamination from the UST or UST system during the term of the security interest; requiring the borrower to comply or come into compliance with applicable federal, state, and local environmental and other laws, rules, and regulations during the term of the security interest; securing or exercising authority to monitor or inspect the UST or UST system or facility or property on which the UST or UST system is located (including on-site inspections) in which

indicia of ownership are maintained, or the borrower's business or financial condition during the term of the security interest; or taking other actions to adequately police the loan or security interest (such as requiring a borrower to comply with any warranties, covenants, conditions, representations, or promises from the borrower).

(B) Policing activities also include undertaking by the holder of UST environmental compliance actions and voluntary environmental actions taken in compliance with this part, provided that the holder does not otherwise participate in the management or daily operation of the UST or UST system as provided in §280.210(a) and §280.230. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of an UST or UST system, UST upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in this part or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the UST or UST system.

(ii) *Loan work out.* A holder who engages in work out activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the UST or UST system as provided in §280.210(a). For purposes of this rule, “work out” refers to those actions by which a holder, at any time prior to foreclosure, seeks to prevent, cure, or mitigate a default by the borrower or obligor; or to preserve, or prevent the diminution of, the value of the security. Work out activities include, but

are not limited to, restructuring or renegotiating the terms of the security interest; requiring payment of additional rent or interest; exercising forbearance; requiring or exercising rights pursuant to an assignment of accounts or other amounts owing to an obligor; requiring or exercising rights pursuant to an escrow agreement pertaining to amounts owing to an obligor; providing specific or general financial or other advice, suggestions, counseling, or guidance; and exercising any right or remedy the holder is entitled to by law or under any warranties, covenants, conditions, representations, or promises from the borrower.

(c) Foreclosure on an UST or UST system or facility or property on which an UST or UST system is located, and participation in management activities post-foreclosure.

(1) *Foreclosure*. (i) Indicia of ownership that are held primarily to protect a security interest include legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. For purposes of this subpart, the term "foreclosure" means that legal, marketable or equitable title or deed has been issued, approved, and recorded, and that the holder has obtained access to the UST, UST system, UST facility, and property on which the UST or UST system is located, provided that the holder acted diligently to acquire marketable title or deed and to gain access to the UST, UST system, UST facility, and property on which the UST or UST system is located. The indicia of ownership held after foreclosure continue to be maintained primarily as protection for a security interest provided that the holder undertakes to sell, re-lease an UST or UST system or facility or property on which the UST or UST system is located, held pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or otherwise divest itself of the UST or UST system or facility or property on which the UST or UST system is located, in a reasonably expeditious manner, using whatever commercially reasonable means are relevant or appropriate with respect

to the UST or UST system or facility or property on which the UST or UST system is located, taking all facts and circumstances into consideration, and provided that the holder does not participate in management (as defined in §280.210(a)) prior to or after foreclosure.

(ii) For purposes of establishing that a holder is seeking to sell, re-lease pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or divest in a reasonably expeditious manner an UST or UST system or facility or property on which the UST or UST system is located, the holder may use whatever commercially reasonable means as are relevant or appropriate with respect to the UST or UST system or facility or property on which the UST or UST system is located, or may employ the means specified in §280.210(c)(2). A holder that outbids, rejects, or fails to act upon a written *bona fide,* firm offer of fair consideration for the UST or UST system or facility or property on which the UST or UST system is located, as provided in §280.210(c)(2), is not considered to hold indicia of ownership primarily to protect a security interest.

(2) Holding foreclosed property for disposition and liquidation. A holder, who does not participate in management prior to or after foreclosure, may sell, re-lease, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), an UST or UST system or facility or property on which the UST or UST system is located, liquidate, wind up operations, and take measures, prior to sale or other disposition, to preserve, protect, or prepare the secured UST or UST system or facility or property on which the UST or UST system is located. A holder may also arrange for an existing or new operator to continue or initiate operation of the UST or UST system. The holder may conduct these activities without voiding the security interest exemption, subject to the requirements of this subpart.

(i) A holder establishes that the ownership indicia maintained after foreclosure continue to be held primarily to protect a security interest by, within 12 months following foreclosure, listing the UST or UST system or the facility or property on which the UST or UST system is located, with a broker, dealer, or agent who deals with the type of property in question, or by advertising the UST or UST system or facility or property on which the UST or UST system is located, as being for sale or disposition on at least a monthly basis in either a real estate publication or a trade or other publication suitable for the UST or UST system or facility or property on which the UST or UST system is located, or a newspaper of general circulation (defined as one with a circulation over 10,000, or one suitable under any applicable federal, state, or local rules of court for publication required by court order or rules of civil procedure) covering the location of the UST or UST system or facility or property on which the UST or UST system is located. For purposes of this provision, the 12-month period begins to run from December 6, 1995 or from the date that the marketable title or deed has been issued, approved and recorded, and the holder has obtained access to the UST, UST system, UST facility and property on which the UST or UST system is located, whichever is later, provided that the holder acted diligently to acquire marketable title or deed and to obtain access to the UST, UST system, UST facility and property on which the UST or UST system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the UST or UST system, the 12-month period begins to run from December 6, 1995 or from the date on which the holder first acquires either title to or possession of the secured UST or UST system, or facility or property on which the UST or UST system is located, whichever is later.

(ii) A holder that outbids, rejects, or fails to act upon an offer of fair consideration for the UST or UST system or the facility or property on which the UST or UST system is located,

establishes by such outbidding, rejection, or failure to act, that the ownership indicia in the secured UST or UST system or facility or property on which the UST or UST system is located are not held primarily to protect the security interest, unless the holder is required, in order to avoid liability under federal or state law, to make a higher bid, to obtain a higher offer, or to seek or obtain an offer in a different manner.

(A) Fair consideration, in the case of a holder maintaining indicia of ownership primarily to protect a senior security interest in the UST or UST system or facility or property on which the UST or UST system is located, is the value of the security interest as defined in this section. The value of the security interest includes all debt and costs incurred by the security interest holder, and is calculated as an amount equal to or in excess of the sum of the outstanding principal (or comparable amount in the case of a lease that constitutes a security interest) owed to the holder immediately preceding the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure, plus any unpaid interest, rent, or penalties (whether arising before or after foreclosure). The value of the security interest also includes all reasonable and necessary costs, fees, or other charges incurred by the holder incident to work out, foreclosure, retention, preserving, protecting, and preparing, prior to sale, the UST or UST system or facility or property on which the UST or UST system is located, re-lease, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), of an UST or UST system or facility or property on which the UST or UST system is located, or other disposition. The value of the security interest also includes environmental investigation costs (which could include a site assessment, inspection, and/or audit of the UST or UST system or facility or property on which the UST or UST system is located), and corrective action costs incurred under §§280.51 through 280.67 or any other costs incurred as a result of reasonable

efforts to comply with any other applicable federal, state or local law or regulation; less any amounts received by the holder in connection with any partial disposition of the property and any amounts paid by the borrower (if not already applied to the borrower's obligations) subsequent to the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure. In the case of a holder maintaining indicia of ownership primarily to protect a junior security interest, fair consideration is the value of all outstanding higher priority security interests plus the value of the security interest held by the junior holder, each calculated as set forth in this paragraph (c).

(B) Outbids, rejects, or fails to act upon an offer of fair consideration means that the holder outbids, rejects, or fails to act upon within 90 days of receipt, a written, *bona fide,* firm offer of fair consideration for the UST or UST system or facility or property on which the UST or UST system is located received at any time after six months following foreclosure, as defined in §280.210(c). A "written, *bona fide,* firm offer" means a legally enforceable, commercially reasonable, cash offer solely for the foreclosed UST or UST system or facility or property on which the UST or UST system is located, including all material terms of the transaction, from a ready, willing, and able purchaser who demonstrates to the holder's satisfaction the ability to perform. For purposes of this provision, the six-month period begins to run from December 6, 1995 or from the date that marketable title or deed has been issued, approved and recorded to the holder, and the holder has obtained access to the UST, UST system, UST facility and property on which the UST or UST system is located, whichever is later, provided that the holder was acting diligently to acquire marketable title or deed and to obtain access to the UST or UST system, UST facility and property on which the UST or UST system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the UST or UST system, the

six-month period begins to run from December 6, 1995 or from the date on which the holder first acquires either title to or possession of the secured UST or UST system, or facility or property on which the UST or UST system is located, whichever is later.

(3) Actions that are not participation in management post-foreclosure. A holder is not considered to be participating in the management of an UST or UST system or facility or property on which the UST or UST system is located when undertaking actions under this part, provided that the holder does not otherwise participate in the management or daily operation of the UST or UST system as provided in §280.210(a) and §280.230. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of an UST or UST system, UST upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in this part or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the UST or UST system.

§280.220 Ownership of an underground storage tank or underground storage tank system or facility or property on which an underground storage tank or underground storage tank system is located.

Ownership of an UST or UST system or facility or property on which an UST or UST system is located. A holder is not an "owner" of a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located for purposes of compliance with the UST technical standards as defined in §280.200(a), the UST corrective action requirements under §§280.51 through 280.67, and the UST financial responsibility requirements under §§280.90 through 280.111, provided the person:

(a) Does not participate in the management of the UST or UST system as defined in §280.210; and

(b) Does not engage in petroleum production, refining, and marketing as defined in §280.200(b).

§280.230 Operating an underground storage tank or underground storage tank system.

(a) *Operating an UST or UST system prior to foreclosure*. A holder, prior to foreclosure, as defined in §280.210(c), is not an "operator" of a petroleum UST or UST system for purposes of compliance with the UST technical standards as defined in §280.200(a), the UST corrective action requirements under §§280.51 through 280.67, and the UST financial responsibility requirements under §§280.90 through 280.111, provided that, after December 6, 1995, the holder is not in control of or does not have responsibility for the daily operation of the UST or UST system.

(b) *Operating an UST or UST system after foreclosure*. The following provisions apply to a holder who, through foreclosure, as defined in §280.210(c), acquires a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located.

(1) A holder is not an "operator" of a petroleum UST or UST system for purposes of compliance with this part if there is an operator, other than the holder, who is in control of or has responsibility for the daily operation of the UST or UST system, and who can be held responsible for compliance with applicable requirements of this part or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281.

(2) If another operator does not exist, as provided for under paragraph (b)(1) of this section, a holder is not an "operator" of the UST or UST system, for purposes of compliance with the UST technical standards as defined in §280.200(a), the UST corrective action requirements under §§280.51 through 280.67, and the UST financial responsibility requirements under §§280.90 through 280.111, provided that the holder:

(i) Empties all of its known USTs and UST systems within 60 calendar days after foreclosure or within 60 calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the implementing agency, so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment; and

(ii) Empties those USTs and UST systems that are discovered after foreclosure within 60 calendar days after discovery or within 60 calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the implementing agency, so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment.

(3) If another operator does not exist, as provided for under paragraph (b)(1) of this section, in addition to satisfying the conditions under paragraph (b)(2) of this section, the holder must either:

(i) Permanently close the UST or UST system in accordance with §§280.71 through 280.74, except §280.72(b); or

(ii) Temporarily close the UST or UST system in accordance with the following applicable provisions of §280.70:

(A) Continue operation and maintenance of corrosion protection in accordance with §280.31;

(B) Report suspected releases to the implementing agency; and

(C) Conduct a site assessment in accordance with §280.72(a) if the UST system is temporarily closed for more than 12 months and the UST system does not meet either the performance standards in §280.20 for new UST systems or the upgrading requirements in §280.21, except that the spill and overfill equipment requirements do not have to be met. The holder must report any suspected releases to the implementing agency. For purposes of this provision, the 12-month period begins to run from December 6, 1995 or from the date on which the UST system is emptied and secured under paragraph (b)(2) of this section, whichever is later.

(4) The UST system can remain in temporary closure until a subsequent purchaser has acquired marketable title to the UST or UST system or facility or property on which the UST or UST system is located. Once a subsequent purchaser acquires marketable title to the UST or UST system or facility or property on which the UST or UST system is located, the purchaser must decide whether to operate or close the UST or UST system in accordance with applicable requirements in this part or applicable state requirements in those states that have been delegated

authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281.

Subpart J – Operator Training

§ 280.240 General requirement for all UST systems.

Not later than October 13, 2018, all owners and operators of UST systems must ensure they have designated Class A, Class B, and Class C operators who meet the requirements of this subpart.

§ 280.241 Designation of Class A, B, and C operators.

UST system owners and operators must designate:

(a) At least one Class A and one Class B operator for each UST or group of USTs at a facility; and

(b) Each individual who meets the definition of Class C operator at the UST facility as a Class C operator.

§ 280.242 Requirements for operator training.

UST system owners and operators must ensure Class A, Class B, and Class C operators meet the requirements of this section. Any individual designated for more than one operator

class must successfully complete the required training program or comparable examination according to the operator class in which the individual is designated.

(a) *Class A operators*. Each designated Class A operator must either be trained in accordance with paragraphs (a)(1) and (2) of this section or pass a comparable examination in accordance with paragraph (e) of this section.

(1) At a minimum, the training program for the Class A operator must provide general knowledge of the requirements in this paragraph (a). At a minimum, the training must teach the Class A operators, as applicable, about the purpose, methods, and function of:

(i) Spill and overfill prevention;

(ii) Release detection;

(iii) Corrosion protection;

(iv) Emergency response;

(v) Product and equipment compatibility and demonstration;

(vi) Financial responsibility;

(vii) Notification and storage tank registration;

(viii) Temporary and permanent closure;

(ix) Related reporting, recordkeeping, testing, and inspections;

(x) Environmental and regulatory consequences of releases; and

(xi) Training requirements for Class B and Class C operators.

(2) At a minimum, the training program must evaluate Class A operators to determine these individuals have the knowledge and skills to make informed decisions regarding compliance and determine whether appropriate individuals are fulfilling the operation,

maintenance, and recordkeeping requirements for UST systems in accordance with paragraph (a)(1) of this section.

(b) *Class B operators*. Each designated Class B operator must either receive training in accordance with paragraphs (b)(1) and (2) of this section or pass a comparable examination, in accordance with paragraph (e) of this section.

(1) At a minimum, the training program for the Class B operator must cover either: general requirements that encompass all regulatory requirements and typical equipment used at UST facilities; or site-specific requirements which address only the regulatory requirements and equipment specific to the facility. At a minimum, the training program for Class B operators must teach the Class B operator, as applicable, about the purpose, methods, and function of:

(i) Operation and maintenance;

(ii) Spill and overfill prevention;

(iii) Release detection and related reporting;

(iv) Corrosion protection;

(v) Emergency response;

(vi) Product and equipment compatibility and demonstration;

(vii) Reporting, recordkeeping, testing, and inspections;

(viii) Environmental and regulatory consequences of releases; and

(ix) Training requirements for Class C operators.

(2) At a minimum, the training program must evaluate Class B operators to determine these individuals have the knowledge and skills to implement applicable UST regulatory requirements in the field on the components of typical UST systems or, as applicable, site-specific equipment used at an UST facility in accordance with paragraph (b)(1) of this section.

(c) *Class C operators*. Each designated Class C operator must either: be trained by a Class A or Class B operator in accordance with paragraphs (c)(1) and (2) of this section; complete a training program in accordance with paragraphs (c)(1) and (2) of this section; or pass a comparable examination, in accordance with paragraph (e) of this section.

(1) At a minimum, the training program for the Class C operator must teach the Class C operators to take appropriate actions (including notifying appropriate authorities) in response to emergencies or alarms caused by spills or releases resulting from the operation of the UST system.

(2) At a minimum, the training program must evaluate Class C operators to determine these individuals have the knowledge and skills to take appropriate action (including notifying appropriate authorities) in response to emergencies or alarms caused by spills or releases from an underground storage tank system.

(d) *Training program.* Any training program must meet the minimum requirements of this section and include an evaluation through testing, a practical demonstration, or another approach acceptable to the implementing agency.

(e) *Comparable examination*. A comparable examination must, at a minimum, test the knowledge of the Class A, Class B, or Class C operators in accordance with the requirements of paragraphs (a), (b), or (c) of this section, as applicable.

§ 280.243 Timing of operator training.

(a) An owner and operator must ensure that designated Class A, Class B, and Class C operators meet the requirements in § 280.242 not later than October 13, 2018.

(b) Class A and Class B operators designated after October 13, 2018 must meet requirements in § 280.242 within 30 days of assuming duties.

(c) Class C operators designated after October 13, 2018 must be trained before assuming duties of a Class C operator.

§ 280.244 Retraining.

Class A and Class B operators of UST systems determined by the implementing agency to be out of compliance must complete a training program or comparable examination in accordance with requirements in § 280.242. The training program or comparable examination must be developed or administered by an independent organization, the implementing agency, or a recognized authority. At a minimum, the training must cover the area(s) determined to be out of compliance. UST system owners and operators must ensure Class A and Class B operators are retrained pursuant to this section no later than 30 days from the date the implementing agency determines the facility is out of compliance except in one of the following situations:

(a) Class A and Class B operators take annual refresher training. Refresher training for Class A and Class B operators must cover all applicable requirements in § 280.242, or

(b) The implementing agency, at its discretion, waives this retraining requirement for either the Class A or Class B operator or both.

§ 280.245 Documentation.

Owners and operators of underground storage tank systems must maintain a list of designated Class A, Class B, and Class C operators and maintain records verifying that training and retraining, as applicable, have been completed, in accordance with § 280.34 as follows:

(a) The list must:

(1) Identify all Class A, Class B, and Class C operators currently designated for the facility; and

(2) Include names, class of operator trained, date assumed duties, date each completed initial training, and any retraining.

(b) Records verifying completion of training or retraining must be a paper or electronic record for Class A, Class B, and Class C operators. The records, at a minimum, must identify name of trainee, date trained, operator training class completed, and list the name of the trainer or examiner and the training company name, address, and telephone number. Owners and operators must maintain these records for as long as Class A, Class B, and Class C operators are designated. The following requirements also apply to the following types of training:

(1) Records from classroom or field training programs (including Class C operator training provided by the Class A or Class B operator) or a comparable examination must, at a minimum, be signed by the trainer or examiner;

(2) Records from computer based training must, at a minimum, indicate the name of the training program and web address, if Internet based; and

(3) Records of retraining must include those areas on which the Class A or Class B operator has been retrained.

Subpart K – UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel

Distribution Systems

§ 280.250 Definitions.

For purposes of this subpart, the following definitions apply:

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

Field-constructed tank means a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed.

§ 280.251 General requirements.

(a) *Implementation of requirements.* Owners and operators must comply with the requirements of this part for UST systems with field-constructed tanks and airport hydrant systems as follows:

(1) For UST systems installed on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] the requirements are effective according to the following schedule:

Requirement	Effective Date
Upgrading UST systems; general operating requirements; and operator training	October 13, 2018
Release detection	October 13, 2018
Release reporting, response, and investigation; closure; financial responsibility and notification (except as provided in paragraph (b) of this section)	[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

(2) For UST systems installed after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], the requirements apply at installation.

(b) Not later than October 13, 2018, all owners of previously deferred UST systems must submit a one-time notice of tank system existence to the implementing agency, using the form in appendix I of this part or a state form in accordance with § 280.22(c). Owners and operators of UST systems in use as of [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must demonstrate financial responsibility at the time of submission of the notification form.

(c) Except as provided in § 280.252, owners and operators must comply with the requirements of subparts A through H and J of this part.

(d) In addition to the codes of practice listed in § 280.20, owners and operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, *Petroleum Fuel Facilities*, when designing, constructing, and installing airport hydrant systems and UST systems with field-constructed tanks.

§ 280.252 Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems.

(a) *Exception to piping secondary containment requirements.* Owners and operators may use single walled piping when installing or replacing piping associated with UST systems with field-constructed tanks greater than 50,000 gallons and piping associated with airport hydrant systems. Piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons not part of an airport hydrant system must meet the secondary containment requirement when installed or replaced.

(b) *Upgrade requirements*. Not later than October 13, 2018, airport hydrant systems and UST systems with field-constructed tanks where installation commenced on or before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must meet the following requirements or be permanently closed pursuant to subpart G of this part.

(1) *Corrosion protection*. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:

(i) Except as provided in paragraph (a) of this section, the new UST system performance standards for tanks at § 280.20(a) and for piping at § 280.20(b); or

(ii) Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory and meets the following:

(A) Cathodic protection must meet the requirements of § 280.20(a)(2)(ii), (iii), and (iv) for tanks, and § 280.20(b)(2)(ii), (iii), and (iv) for piping.

(B) Tanks greater than 10 years old without cathodic protection must be assessed to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment must be by internal inspection or another method determined by the implementing agency to adequately assess the tank for structural soundness and corrosion holes.

Note to paragraph (b). The following codes of practice may be used to comply with this paragraph (b):

(A) NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection";

(B) NACE International Standard Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems";

(C) National Leak Prevention Association Standard 631, Chapter C, "Internal Inspection of Steel Tanks for Retrofit of Cathodic Protection"; or

(D) American Society for Testing and Materials Standard G158, "Standard Guide for Three Methods of Assessing Buried Steel Tanks".

(2) *Spill and overfill prevention equipment*. To prevent spilling and overfilling associated with product transfer to the UST system, all UST systems with field-constructed tanks and airport hydrant systems must comply with new UST system spill and overfill prevention equipment requirements specified in § 280.20(c).

(c) *Walkthrough inspections.* In addition to the walkthrough inspection requirements in § 280.36, owners and operators must inspect the following additional areas for airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to § 280.36(b).

(1) Hydrant pits – visually check for any damage; remove any liquid or debris; and check for any leaks, and

(2) Hydrant piping vaults – check for any hydrant piping leaks.

(d) *Release detection*. Owners and operators of UST systems with field-constructed tanks and airport hydrant systems must begin meeting the release detection requirements described in this subpart not later than October 13, 2018.

(1) *Methods of release detection for field-constructed tanks.* Owners and operators of field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in subpart D of this part. Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in subpart D (except § 280.43(e) and (f) must be combined with inventory control as stated below) or use one or a combination of the following alternative methods of release detection:

(i) Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;

(ii) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to one gallon per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three years;

(iii) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to two gallons per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two years;

(iv) Perform vapor monitoring (conducted in accordance with § 280.43(e) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

(v) Perform inventory control (conducted in accordance with Department of Defense

Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and

(A) Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two years; or

(B) Perform vapor monitoring or groundwater monitoring (conducted in accordance with § 280.43(e) or (f), respectively, for the stored regulated substance) at least every 30 days; or

(vi) Another method approved by the implementing agency if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (d)(1)(i) through (v) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability of detection.

(2) *Methods of release detection for piping*. Owners and operators of underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in subpart D of this part. Owners and operators of underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must follow either the requirements in subpart D (except § 280.43(e) and (f) must be combined with inventory control as stated below) or use one or a combination of the following alternative methods of release detection:

(i)(A) Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the table below.

Maximum Leak Detection Rate Per Test Section Volume

Test Section Volume (Gallons)	Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)	Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)
< 50,000	1.0	0.5
≥ 50,000 to < 75,000	1.5	0.75
≥ 75,000 to < 100,000	2.0	1.0
≥ 100,000	3.0	1.5

(B) Piping segment volumes ≥ 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

Phase In For Piping Segments ≥ 100,000 Gallons In Volume	
First test	Not later than October 13, 2018 (may use up to 6.0 gph leak rate)
Second test	Between October 13, 2018 and October 13, 2021 (may use up to 6.0 gph leak rate)
Third test	Between October 13, 2021 and October 13, 2022 (must use 3.0 gph for leak rate)
Subsequent tests	After October 13, 2022, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above

(ii) Perform vapor monitoring (conducted in accordance with § 280.43(e) for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;

(iii) Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and

(A) Perform a line tightness test (conducted in accordance with paragraph (d)(2)(i) of this section using the leak rates for the semiannual test) at least every two years; or

(B) Perform vapor monitoring or groundwater monitoring (conducted in accordance with § 280.43(e) or (f), respectively, for the stored regulated substance) at least every 30 days; or

(iv) Another method approved by the implementing agency if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (d)(2)(i) through (iii) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability of detection.

(3) *Recordkeeping for release detection.* Owners and operators must maintain release detection records according to the recordkeeping requirements in § 280.45.

(e) *Applicability of closure requirements to previously closed UST systems.* When directed by the implementing agency, the owner and operator of an UST system with field-constructed tanks or airport hydrant system permanently closed before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] must assess the excavation zone and close the UST system in accordance with subpart G of this part if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.

United States
Environmental Protection Agency
Washington, DC 20460

OMB Control No. 2050-0068
Approval expires XX/XX/XX

Notification for Underground Storage Tanks

Implementing Agency Name And Address:

IMPLEMENTING AGENCY USE ONLY
ID NUMBER:
DATE RECEIVED:
DATE ENTERED INTO COMPUTER:
DATA ENTRY CLERK INITIALS:
OWNER WAS CONTACTED TO CLARIFY RESPONSES, COMMENTS:

TYPE OF NOTIFICATION

☐ A. NEW FACILITY OR ONE-TIME NOTIFICATION (previously deferred system)	☐ B. AMENDED	☐ C. CLOSURE OR CHANGE-IN-SERVICE

_____ Number of tanks at facility

_____ Number of continuation sheets attached

INSTRUCTIONS AND GENERAL INFORMATION

Please **type or print in ink**. Also, be sure you have signatures in ink for sections VIII and XI. Complete a notification form for each location containing underground storage tanks. If more than 5 tanks are owned at this location, you may photocopy pages 3 through 6 and use them for additional tanks.

The primary purpose of this notification form is to provide information about the installation, existence, changes to, and closure of underground storage tank systems (USTs) that store or have stored petroleum or hazardous substances. The information you provide will be based on reasonably available records, or in the absence of such records, your knowledge or recollection.

Federal law requires UST owners to use this notification form for all USTs storing regulated substances that are brought into use after May 8, 1986, or USTs in the ground as of May 8, 1986 that have stored regulated substances at any time since January 1, 1974. The information requested is required by Section 9002 of the Solid Waste Disposal Act (SWDA), as amended.

Who Must Notify? 40 CFR part 280, as amended, requires owners of USTs that store regulated substances (unless exempted) to notify implementing agencies of the existence of their USTs. Owner is defined as:

- In the case of an UST in use on November 8, 1984, or brought into use after that date, any person who owns an UST used for storage, use, or dispensing of regulated substances; or
- In the case of an UST in use before November 8, 1984, but no longer in use on that date, any person who owned the UST immediately before its discontinuation.

Also, owners of previously deferred UST systems with field-constructed tanks and airport hydrant fuel distribution systems in the ground as of [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTE] must submit a one-time notification of existence by October 13, 2018. Owners of UST systems with field-constructed tanks and airport hydrant fuel distribution systems brought into use after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] are considered new facilities and must follow the same notification requirements as all other UST owners.

What USTs Are Included? An UST system is defined as any one or combination of tanks that is used to contain an accumulation of regulated substances, and whose volume (including connected underground piping) is 10 percent or more beneath the ground. Regulated USTs store petroleum or hazardous substances (see **What Substances Are Covered** below). This includes UST systems with field-constructed tanks and airport hydrant fuel distribution systems.

What Tanks Are Excluded From Notification (see § 280.10 and § 280.12)?

- Tanks removed from the ground before May 8, 1986;
- Farm or residential tanks of 1,100 gallons or less capacity storing motor fuel for noncommercial purposes;
- Tanks storing heating oil for use on the premises where stored;
- Septic tanks;
- Certain pipeline facilities regulated under chapters 601 and 603 of Title 49;
- Surface impoundments, pits, ponds, or lagoons;
- Storm water or wastewater collection systems;
- Flow-through process tanks;
- Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
- Tanks on or above the floor of underground areas, such as basements or tunnels;
- Tanks with a capacity of 110 gallons or less;
- Wastewater treatment tank systems;
- UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954;
- UST systems that are part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50.

What Substances Are Covered? The notification requirements apply to USTs containing petroleum or certain hazardous substances. Petroleum includes gasoline, used oil, diesel fuel, crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). Hazardous substances are those found in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, with the exception of those substances regulated as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act.

When And Who To Notify? Owners who bring USTs into use after May 8, 1986 must submit this notification form to the implementing agency within 30 days of bringing the UST into use. If the implementing agency requires notification of any amendments to the facility, send information to the implementing agency immediately.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $16,000 for each tank for which notification is not given or for which false information is given.

I. OWNERSHIP OF USTs

Owner Name (Corporation, Individual, Public Agency, Or Other Entity)

Street Address

County

City	State	Zip Code

II. LOCATION OF USTs

If required by implementing agency, give the geographic location of USTs either in decimal degrees, or degrees, minutes, and seconds. Example: Latitude: 36.123480 (or 36° 7' 24.4"), Longitude: -106.549876 (or -106° 32' 59.6")

Latitude _____ **Longitude** _____

Facility Name Or Company Site Identifier, As Applicable

☐ If address is the same as in Section I, check the box and proceed to section III.
If address is different, enter address below:

Street Address

County

Phone Number (Include Area Code)	City	State	Zip Code
EPA Form 7530-1 (Rev. 6-2015) Electronic and paper versions acceptable. Previous editions may be used while supplies last.			

United States
Environmental Protection Agency
Washington, DC 20460

OMB Control No. 2050-0068
Approval expires XX/XX/XX

Notification For Underground Storage Tanks

III. TYPE OF OWNER

- ☐ Federal Government
- ☐ State Government
- ☐ Commercial
- ☐ Tribal Government
- ☐ Local Government
- ☐ Private

IV. INDIAN COUNTRY

☐ USTs are located on land within an Indian reservation or on trust lands outside reservation boundaries

Federally recognized tribe where USTs are located:

V. TYPE OF FACILITY

- ☐ Auto Dealership
- ☐ Commercial Airport Or Airline
- ☐ Contractor
- ☐ Farm
- ☐ Federal – Non-military
- ☐ Federal – Military
- ☐ Gas Station
- ☐ Industrial
- ☐ Petroleum Distributor
- ☐ Railroad
- ☐ Residential
- ☐ Trucking Or Transport
- ☐ Utilities
- ☐ Other (Explain) _____

VI. CONTACT PERSON IN CHARGE OF TANKS

Name:	Job Title:	Address:	Phone Number (Include Area Code):

VII. FINANCIAL RESPONSIBILITY

☐ I have met the financial responsibility requirements (in accordance with 40 CFR part 280 Subpart H) by using the following mechanisms:

(check all that apply)

- ☐ Bond Rating Test
- ☐ Commercial Insurance
- ☐ Guarantee
- ☐ Letter Of Credit
- ☐ Local Government Financial Test
- ☐ Risk Retention Group
- ☐ Self-insurance (Financial Test)
- ☐ State Fund
- ☐ Surety Bond
- ☐ Trust Fund
- ☐ Other Method (describe here)

_____

☐ I do not have to meet financial responsibility requirements because 40 CFR part 280 Subpart H is not applicable to me (e.g., if you are a state or federal owner).

VIII. CERTIFICATION (Read and sign after completing ALL SECTIONS of this notification form)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in Sections I through XI of this notification form and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative (Print)	Signature	Date Signed

Paperwork Reduction Act Notice
The public reporting and recordkeeping burden for this collection of information is estimated to average 30 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

EPA Form 7530-1 (Rev. 6-2015) Electronic and paper versions acceptable.
Previous editions may be used while supplies last.

EPA	United States **Environmental Protection Agency** Washington, DC 20460	OMB Control No. 2050-0068 Approval expires XX/XX/XX

Notification For Underground Storage Tanks

IX. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for all tanks and piping at this location)

Tank Identification Number	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
1. Status Of Tank (check only one)					
Currently In Use	☐	☐	☐	☐	☐
Temporarily Closed	☐	☐	☐	☐	☐
Permanently Closed	☐	☐	☐	☐	☐
2. Date Of Installation (month/year)					
3. Estimated Total Capacity (gallons)					
4. Tank Attributes (check all that apply)					
Asphalt Coated Or Bare Steel	☐	☐	☐	☐	☐
Cathodically Protected Steel (impressed current)	☐	☐	☐	☐	☐
Cathodically Protected Steel (sacrificial anodes)	☐	☐	☐	☐	☐
Coated and Cathodically Protected Steel (impressed current)	☐	☐	☐	☐	☐
Coated and Cathodically Protected Steel (sacrificial anodes)	☐	☐	☐	☐	☐
Composite (steel clad with noncorrodible material)	☐	☐	☐	☐	☐
Concrete	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Noncorrodible Tank Jacket	☐	☐	☐	☐	☐
Lined Interior	☐	☐	☐	☐	☐
Excavation Liner	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐
Manifolded	☐	☐	☐	☐	☐
Compartmentalized	☐	☐	☐	☐	☐
Field-constructed	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Specify Here	_____	_____	_____	_____	_____
Check Box If Tank Has Ever Been Repaired	☐	☐	☐	☐	☐
5. Overfill Protection Installed (check all that apply)					
Automatic Shutoff	☐	☐	☐	☐	☐
Flow Restrictor	☐	☐	☐	☐	☐
High-level Alarm	☐	☐	☐	☐	☐
Other, Specify Here	_____	_____	_____	_____	_____
6. Spill Prevention Installed	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐

Notification For Underground Storage Tanks

Tank Identification Number	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
7. Piping Attributes (check all that apply)					
Bare Steel	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Flexible Plastic	☐	☐	☐	☐	☐
Copper	☐	☐	☐	☐	☐
Cathodically Protected (impressed current)	☐	☐	☐	☐	☐
Cathodically Protected (sacrificial anodes)	☐	☐	☐	☐	☐
Double Walled	☐	☐	☐	☐	☐
Secondary Containment	☐	☐	☐	☐	☐
Airport Hydrant Piping	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Specify Here	_____ _____	_____ _____	_____ _____	_____ _____	_____ _____
8. Piping Delivery Type (check all that apply)					
Safe Suction (no valve at tank)	☐	☐	☐	☐	☐
U.S. Suction (valve at tank)	☐	☐	☐	☐	☐
Pressure	☐	☐	☐	☐	☐
Gravity Feed	☐	☐	☐	☐	☐
9. Substance Currently Stored (or last stored in the case of closed tanks) (check all that apply)					
Gasoline (containing ≤ 10% ethanol)	☐	☐	☐	☐	☐
Diesel	☐	☐	☐	☐	☐
Biodiesel	☐	☐	☐	☐	☐
Kerosene	☐	☐	☐	☐	☐
Heating Oil	☐	☐	☐	☐	☐
Used Oil	☐	☐	☐	☐	☐
Gasoline Containing >10% Ethanol (specify amount of ethanol)	_____	_____	_____	_____	_____
Diesel Containing >20% Biodiesel (specify amount of biodiesel)	_____	_____	_____	_____	_____
Other, specify here	_____	_____	_____	_____	_____
Hazardous Substance	☐	☐	☐	☐	☐
CERCLA Name Or CAS Number	_____	_____	_____	_____	_____
Mixture Of Substances	☐	☐	☐	☐	☐
Please Specify Substances Here	_____	_____	_____	_____	_____

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Previous editions may be used while supplies last.

EPA	United States **Environmental Protection Agency** Washington, DC 20460	OMB Control No. 2050-0068 Approval expires XX/XX/XX

Notification For Underground Storage Tanks

Tank Identification Number	Tank No.		Tank No.		Tank No.		Tank No.		Tank No.	
10. Release Detection (check all that apply)	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE	TANK	PIPE
Manual Tank Gauging	☐		☐		☐		☐		☐	
Tank Tightness Testing	☐		☐		☐		☐		☐	
Inventory Control	☐		☐		☐		☐		☐	
Automatic Tank Gauging	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Vapor Monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Groundwater Monitoring	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Interstitial Monitoring (required for new or replaced tanks or piping)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Statistical Inventory Reconciliation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Automatic Line Leak Detectors		☐		☐		☐		☐		☐
Line Tightness Testing		☐		☐		☐		☐		☐
No Release Detection Required (such as some types of suction piping)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other Method Allowed By Implementing Agency	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other, Specify Here	_____		_____		_____		_____		_____	

X. CLOSURE OR CHANGE IN SERVICE

1. Closure Or Change In Service					
Estimated Date The UST Was Last Used For Storing Regulated Substances (month/day/year)	_____	_____	_____	_____	_____
Check Box If This Is A Change In Service (i.e., Change of storage to a non-regulated substance)	☐	☐	☐	☐	☐
2. Tank Closure					
Estimated Date Tank Closed (month/day/year)	_____	_____	_____	_____	_____
(check all that apply below)					
Tank Removed From Ground	☐	☐	☐	☐	☐
Tank Closed In Ground	☐	☐	☐	☐	☐
Tank Filled With Inert Material	☐	☐	☐	☐	☐
Describe The Inert Fill Material Here	_____	_____	_____	_____	_____
3. Site Assessment					
Check Box If The Site Assessment Was Completed	☐	☐	☐	☐	☐
Check Box If Evidence Of A Release Was Detected	☐	☐	☐	☐	☐
Other, Specify Here	_____	_____	_____	_____	_____

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EPA	United States **Environmental Protection Agency** Washington, DC 20460	OMB Control No. 2050-0068 Approval expires XX/XX/XX

Notification For Underground Storage Tanks

Tank Identification Number	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
XI. CERTIFICATION OF INSTALLATION (Complete For UST Systems Installed After December 22, 1988 And For Airport Hydrant Distribution Systems And Field-Constructed USTs Installed After [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**])**					
Installer Of Tank And Piping (check all that apply)					
Installer Certified By Tank And Piping Manufacturers	☐	☐	☐	☐	☐
Installer Certified Or Licensed By The Implementing Agency	☐	☐	☐	☐	☐
Installation Inspected By A Registered Engineer	☐	☐	☐	☐	☐
Installation Inspected And Approved By Implementing Agency	☐	☐	☐	☐	☐
Manufacturer's Installation Checklists Have Been Completed	☐	☐	☐	☐	☐
Another Method Allowed By Implementing Agency	☐	☐	☐	☐	☐
Specify Other Method Here	_____	_____	_____	_____	_____

Signature Of UST Installer Certifying Proper Installation Of UST System

_____ Name

_____ Signature

_____ Date

_____ Position

_____ Company

EPA Form 7530-1 (Rev. 6-2015) Electronic and paper versions acceptable.
Previous editions may be used while supplies last.

Appendix II to Part 280 - Notification of Ownership Change for Underground Storage Tanks (Form)

EPA	United States **Environmental Protection Agency** Washington, DC 20460	OMB Control No. 2050-0068 Approval expires XX/XX/XX

Notification of Ownership Change for Underground Storage Tanks

Implementing Agency Name And Address:

IMPLEMENTING AGENCY USE ONLY

ID NUMBER:

DATE RECEIVED:

DATE ENTERED INTO COMPUTER:

DATA ENTRY CLERK INITIALS:

OWNER WAS CONTACTED TO CLARIFY RESPONSES, COMMENTS:

INSTRUCTIONS AND GENERAL INFORMATION

Please **type or print in ink**. Also, be sure you have signatures in ink.

The primary purpose of this notification form is to inform implementing agencies of ownership changes for underground storage tank (UST) systems that store or have stored petroleum or hazardous substances.

Federal regulation requires UST owners to notify the implementing agency of any ownership change for USTs storing regulated substances after [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Who Must Notify? 40 CFR part 280, as amended, requires owners of USTs that store regulated substances (unless exempted) to notify implementing agencies of any ownership changes. Owner is defined as:

- In the case of an UST in use on November 8, 1984, or brought into use after that date, any person who owns an UST used for storage, use, or dispensing of regulated substances; or
- In the case of an UST in use before November 8, 1984, but no longer in use on that date, any person who owned the UST immediately before its discontinuation.

What USTs Are Included? An UST system is defined as any one or combination of tanks that is used to contain an accumulation of regulated substances, and whose volume (including connected underground piping) is 10 percent or more beneath the ground. Regulated USTs store petroleum or hazardous substances (see **What Substances Are Covered** to the right). This includes UST systems with field-constructed tanks and airport hydrant fuel distribution systems.

When And Who To Notify? Any owner or operator who assumes ownership of a regulated UST system must submit this notification form to the implementing agency within 30 days of assuming such ownership.

What Tanks Are Excluded From Notification (see § 280.10 and § 280.12)?

- Tanks removed from the ground before May 8, 1986;
- Farm or residential tanks of 1,100 gallons or less capacity storing motor fuel for noncommercial purposes;
- Tanks storing heating oil for use on the premises where stored;
- Septic tanks;
- Certain pipeline facilities regulated under chapters 601 and 603 of Title 49;
- Surface impoundments, pits, ponds, or lagoons;
- Storm water or wastewater collection systems;
- Flow-through process tanks;
- Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
- Tanks on or above the floor of underground areas, such as basements or tunnels;
- Tanks with a capacity of 110 gallons or less;
- Wastewater treatment tank systems;
- UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954;
- UST systems that are part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50.

What Substances Are Covered? The notification requirements apply to USTs containing petroleum or certain hazardous substances. Petroleum includes gasoline, used oil, diesel fuel, crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). Hazardous substances are those found in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, with the exception of those substances regulated as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $16,000 for each tank for which notification is not given or for which false information is given.

OWNERSHIP OF USTs
Corporation, Individual, Public Agency, Or Other Entity

Current Owner Name	Previous Owner Name
Current Owner Address	Previous Owner Address
Current Owner Phone	Previous Owner Phone

FACILITY NAME AND LOCATION OF USTs

Facility Name

☐ Check here if name changed after ownership

☐ Check this box if the physical address of the USTs is the same as the current owner address. If address is different, enter address below:

If required by implementing agency, give the geographic location of USTs either in decimal degrees, or degrees, minutes, and seconds. Example: Latitude: 36.12348 (or 36° 7' 24.4"), Longitude: -106.549876 (or -106° 32' 59.6")

Latitude _____ **Longitude** _____

Date Of Ownership Change

Signature Of Current Owner: _____ **Date:** _____

Paperwork Reduction Act Notice

The public reporting and recordkeeping burden for this collection of information is estimated to average 30 minutes per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

EPA Form 6200-10 Electronic and paper versions acceptable.

Appendix III to Part 280—Statement for Shipping Tickets and Invoices

Note. A federal law (the Solid Waste Disposal Act, as amended), requires owners of certain underground storage tanks to notify implementing agencies of the existence of their tanks. Notifications must be made within 30 days of bringing the tank into use. Consult EPA's regulation at 40 CFR 280.22 to determine if you are affected by this law.

2. Revise part 281 to read as follows:

PART 281 – APPROVAL OF STATE UNDERGROUND STORAGE TANK PROGRAMS

Subpart A - Purpose, General Requirements and Scope

Sec.

281.10 Purpose.
281.11 General requirements.
281.12 Scope and definitions.

Subpart B - Components of a Program Application

281.20 Program application.
281.21 Description of state program.
281.22 Procedures for adequate enforcement.
281.23 Memorandum of agreement.
281.24 Attorney General's statement.

Subpart C - Criteria for No Less Stringent

281.30 New UST system design, construction, installation, and notification.
281.31 Upgrading existing UST systems.
281.32 General operating requirements.
281.33 Release detection.
281.34 Release reporting, investigation, and confirmation.
281.35 Release response and corrective action.

281.36 Out-of-service UST systems and closure.
281.37 Financial responsibility for UST systems containing petroleum.
281.38 Lender liability.
281.39 Operator training.

Subpart D - Adequate Enforcement of Compliance

281.40 Requirements for compliance program and authority.
281.41 Requirements for enforcement authority.
281.42 Requirements for public participation.
281.43 Sharing of information.

Subpart E - Approval Procedures

281.50 Approval procedures for state programs.
281.51 Revision of approved state programs.

Subpart F - Withdrawal of Approval of State Programs

281.60 Criteria for withdrawal of approval of state programs.
281.61 Procedures for withdrawal of approval of state programs.

Authority: 42 U.S.C. 6912, 6991(c), 6991(d), 6991(e), 6991(i), 6991(k).

Subpart A—Purpose, General Requirements and Scope

§ 281.10 Purpose.

(a) This part specifies the requirements that state programs must meet for approval by the Administrator under section 9004 of the Solid Waste Disposal Act, and the procedures EPA will follow in approving, revising and withdrawing approval of state programs.

(b) State submissions for program approval must be in accordance with the procedures set out in this part.

(c) A state may apply for approval under this part at any time after the promulgation of

release detection, prevention, and corrective action regulations under § 9003 of the Solid Waste Disposal Act.

(d) Any state program approved by the Administrator under this part shall at all times be conducted in accordance with the requirements of this part.

§ 281.11 General requirements.

(a) *State program elements*. The following substantive elements of a state program must be addressed in a state application for approval:

(1) Requirements for all existing and new underground storage tanks:

(i) New UST systems (design, construction, installation, and notification);

(ii) Upgrading of existing UST systems;

(iii) General operating requirements;

(iv) Release detection;

(v) Release reporting, investigation, and confirmation;

(vi) Out-of-service USTs and closure;

(vii) Release response and corrective action;

(viii) Financial responsibility for UST systems containing petroleum; and

(ix) Operator training.

(2) Provisions for adequate enforcement of compliance with the above program elements.

(b) *Final approval*. The state must demonstrate that its requirements under each state program element for existing and new UST systems are no less stringent than the corresponding federal requirements as set forth in subpart C of this part. The state must also demonstrate that

it has a program that provides adequate enforcement of compliance with these requirements.

(c) States with programs approved under this part are authorized to administer the state program in lieu of the federal program and will have primary enforcement responsibility with respect to the requirements of the approved program. EPA retains authority to take enforcement action in approved states as necessary and will notify the designated lead state agency of any such intended action.

§ 281.12 Scope and definitions.

(a) *Scope*. (1) The Administrator may approve either partial or complete state programs. A "partial" state program regulates either solely UST systems containing petroleum or solely UST systems containing hazardous substances. If a "partial" state program is approved, EPA will administer the remaining part of the program. A "complete" state program regulates both petroleum and hazardous substance tanks.

(2) EPA will administer the UST program in Indian country, except where Congress has clearly expressed an intention to grant a state authority to regulate petroleum and hazardous substance USTs in Indian country. In either case, this decision will not impair a state's ability to obtain program approval for petroleum or hazardous substances in non-Indian country in accordance with this part.

(3) Nothing in this subpart precludes a state from:

(i) Adopting or enforcing requirements that are more stringent or more extensive than those required under this part; or

(ii) Operating a program with a greater scope of coverage than that required under this part. Where an approved state program has a greater scope of coverage than required by federal

law, the additional coverage is not part of the federally-approved program.

(b) *Definitions*. (1) The definitions in 40 CFR part 280 apply to this entire part except as described below.

(i) States may use the definitions associated with tank and piping secondary containment as defined in section 9003 of the Solid Waste Disposal Act.

(ii) States may use the definitions associated with operator training as described in § 9010 of the Solid Waste Disposal Act.

(2) For the purposes of this part the term "final approval" means the approval received by a state program that meets the requirements in § 281.11(b).

Subpart B - Components of a Program Application

§ 281.20 Program application.

Any state that seeks to administer a program under this part must submit an application containing the following parts:

(a) A transmittal letter from the Governor of the state requesting program approval;

(b) A description in accordance with § 281.21 of the state program and operating procedures;

(c) A demonstration of the state's procedures to ensure adequate enforcement;

(d) A Memorandum of Agreement outlining roles and responsibilities of EPA and the implementing agency;

(e) An Attorney General's statement in accordance with § 281.25 certifying to applicable state authorities; and

(f) Copies of all applicable state statutes and regulations.

§ 281.21 Description of state program.

A state seeking to administer a program under this part must submit a description of the program it proposes to administer under state law in lieu of the federal program. The description of a state's existing or planned program must include:

(a) The scope of the state program:

(1) Whether the state program regulates UST systems containing petroleum or hazardous substances, or both;

(2) Whether the state program is more stringent or broader in scope than the federal program, and in what ways; and

(3) Whether the state has any existing authority in Indian country or has existing agreements with Indian tribes relevant to the regulation of underground storage tanks.

(b) The organization and structure of the state and local agencies with responsibility for administering the program. The jurisdiction and responsibilities of all state and local implementing agencies must be delineated, appropriate procedures for coordination set forth, and one state agency designated as a "lead agency" to facilitate communications between EPA and the state.

(c) Staff resources to carry out and enforce the required state program elements, both existing and planned, including the number of employees, agency where employees are located, general duties of the employees, and current limits or restrictions on hiring or utilization of staff.

(d) An existing state funding mechanism to meet the estimated costs of administering

and enforcing the required state program elements, and any restrictions or limitations upon this funding.

§ 281.22 Procedures for adequate enforcement.

A state must submit a description of its compliance monitoring and enforcement procedures, including related state administrative or judicial review procedures.

§ 281.23 Memorandum of agreement.

EPA and the approved state will negotiate a Memorandum of Agreement (MOA) containing proposed areas of coordination and shared responsibilities between the state and EPA and separate EPA and state roles and responsibilities in areas including, but not limited to: implementation of partial state programs; enforcement; compliance monitoring; EPA oversight; and sharing and reporting of information. At the time of approval, the MOA must be signed by the Regional Administrator and the appropriate official of the state lead agency.

§ 281.24 - Attorney General's statement.

(a) A state must submit a written demonstration from the Attorney General that the laws and regulations of the state provide adequate authority to carry out the program described under § 281.21 and to meet other requirements of this part. This statement may be signed by independent legal counsel for the state rather than the Attorney General, provided that such counsel has full authority to independently represent the state Agency in court on all matters

pertaining to the state program. This statement must include citations to the specific statutes, administrative regulations, and where appropriate, judicial decisions that demonstrate adequate authority to regulate and enforce requirements for UST systems. State statutes and regulations cited by the state Attorney General must be fully effective when the program is approved.

(b) If a state currently has authority over underground storage tank activities in Indian country, the statement must contain an appropriate analysis of the state's authority.

Subpart C - Criteria for No Less Stringent

§ 281.30 New UST system design, construction, installation, and notification.

In order to be considered no less stringent than the corresponding federal requirements for new UST system design, construction, installation, and notification, the state must have requirements that ensure all new underground storage tanks, and the attached piping in contact with the ground and used to convey the regulated substance stored in the tank, conform to the following:

(a) Be designed, constructed, and installed in a manner that will prevent releases for their operating life due to manufacturing defects, structural failure, or corrosion. Unless the state requires manufacturer and installer financial responsibility and installer certification in accordance with section 9003(i)(2) of the Solid Waste Disposal Act, then the state must meet the following:

(1) New or replaced tanks and piping must use interstitial monitoring within secondary containment in accordance with section 9003(i)(1) of the Solid Waste Disposal Act except as follows:

(i) Underground piping associated with: airport hydrant systems or field-constructed tanks greater than 50,000 gallons or

(ii) Underground suction piping that meets § 281.33(d)(2)(ii).

(2) New motor fuel dispenser systems installed and connected to an UST system must be equipped with under-dispenser containment in accordance with section 9003(i)(1) of the Solid Waste Disposal Act.

Note to paragraph (a). Codes of practice developed by nationally recognized organizations and national independent testing laboratories may be used to demonstrate that the state program requirements are no less stringent in this area.

(b) Be provided with equipment to prevent spills and tank overfills when new tanks are installed or existing tanks are upgraded, unless the tank does not receive more than 25 gallons at one time. Flow restrictors used in vent lines are not allowable forms of overfill prevention when overfill prevention is installed or replaced.

(c) All UST system owners and operators must notify the implementing agency of the existence of any new UST system and notify the implementing agency within a reasonable timeframe when assuming ownership of an UST system using a process designated by the implementing agency.

§ 281.31 Upgrading existing UST systems.

In order to be considered no less stringent than the corresponding federal upgrading requirements, the state must have requirements that ensure existing UST systems meet the

requirements of § 281.30; are upgraded to prevent releases for their operating life due to corrosion, spills, or overfills; or are permanently closed with the following exceptions:

(a) Upgrade requirements for previously deferred UST systems. Previously deferred airport hydrant fuel distribution systems and UST systems with field-constructed tanks must within three years of the effective date of its state requirements meet the requirements of § 281.30 or be permanently closed. This provision would not apply, however, to states that did not defer these UST systems and already had, prior to the effective date of this provision, existing requirements with specified compliance periods for these types of UST systems.

(b) Upgrade requirements for other UST systems. States may allow UST systems to be upgraded if the state determines that the upgrade is appropriate to prevent releases for the operating life of the UST system due to corrosion and spills or overfills.

§ 281.32 General operating requirements.

In order to be considered no less stringent than the corresponding federal general operating requirements, the state must have requirements that ensure all new and existing UST systems conform to the following:

(a) Prevent spills and overfills by ensuring that the space in the tank is sufficient to receive the volume to be transferred and that the transfer operation is monitored constantly;

(b) Where equipped with cathodic protection, be operated and maintained by a person with sufficient training and experience in preventing corrosion, and in a manner that ensures that no releases occur during the operating life of the UST system;

Note to paragraph (b). Codes of practice developed by nationally recognized

organizations and national independent testing laboratories may be used to demonstrate the state program requirements are no less stringent.

(c) Be made of or lined with materials that are compatible with the substance stored; in order to ensure compatibility, the state requirements must also include provisions for demonstrating compatibility with new and innovative regulated substances or other regulated substances identified by the implementing agency or include other provisions determined by the implementing agency to be no less protective of human health and the environment than the provisions for demonstrating compatibility;

(d) At the time of upgrade or repair, be structurally sound and upgraded or repaired in a manner that will prevent releases due to structural failure or corrosion during their operating lives;

(e) Have spill and overfill prevention equipment periodically tested or inspected in a manner and frequency that ensures its functionality for the operating life of the equipment and have the integrity of containment sumps used for interstitial monitoring of piping periodically tested in a manner and frequency that prevents releases during the operating life of the UST system;

(f) Have operation and maintenance walkthrough inspections periodically conducted in a manner and frequency that ensures proper operation and maintenance for the operating life of the UST system; and

(g) Have records of monitoring, testing, repairs, and inspections. These records must be made readily available when requested by the implementing agency.

§ 281.33 Release detection.

In order to be considered no less stringent than the corresponding federal requirements for release detection, the state must have requirements that at a minimum ensure all UST systems are provided with release detection that conforms to the following:

(a) *General methods*. Release detection requirements for owners and operators must consist of a method, or combination of methods, that is:

(1) Capable of detecting a release of the regulated substance from any portion of the UST system that routinely contains regulated substances -- as effectively as any of the methods allowed under this part -- for as long as the UST system is in operation. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the speed and reliability with which the release can be detected.

(2) Designed, installed, calibrated, operated and maintained so that releases will be detected in accordance with the capabilities of the method;

(3) Operated and maintained, and electronic and mechanical components and other equipment are tested or inspected periodically, in a manner and frequency that ensures proper operation to detect releases for the operating life of the release detection equipment.

(b) *Phase-in of requirements*. Release detection requirements must, at a minimum, be applied at all UST systems immediately, except for UST systems previously deferred under § 280.10(a)(1). Release detection requirements must, at a minimum, be scheduled to be applied to those previously deferred UST systems as follows:

(1) Immediately when a new previously deferred UST system is installed; and

(2) For any previously deferred UST system within three years of the effective date of its state requirements. This provision would not apply, however, to states that did not defer these UST systems and already had, prior to the effective date of this provision, existing release

detection requirements with specified compliance periods for these types of UST systems.

(c) *Requirements for petroleum tanks*. All petroleum tanks must meet the following requirements:

(1) All petroleum tanks must be sampled, tested, or checked for releases at least monthly, except that tanks installed before [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] or upgraded tanks (that is, tanks and piping protected from releases due to corrosion and equipped with both spill and overfill prevention devices) may temporarily use monthly inventory control (or its equivalent) in combination with tightness testing (or its equivalent) conducted every five years for the first 10 years after the tank is installed; and

(2) New or replaced petroleum tanks must use interstitial monitoring within secondary containment in accordance with section 9003(i)(1) of the Solid Waste Disposal Act except when the state requires manufacturer and installer financial responsibility and installer certification in accordance with section 9003(i)(2) of the Solid Waste Disposal Act.

(d) *Requirements for petroleum piping*. All underground piping attached to the tank that routinely conveys petroleum must conform to the following:

(1) If the petroleum is conveyed under greater than atmospheric pressure:

(i) The piping must be equipped with release detection that detects a release within an hour by restricting or shutting off flow or sounding an alarm; and

(ii) The piping must have monthly monitoring applied or annual tightness tests conducted.

(2) If suction lines are used:

(i) Tightness tests must be conducted at least once every three years, unless a monthly method of detection is applied to this piping; or

(ii) The piping is designed to allow the contents of the pipe to drain back into the storage tank if the suction is released and is also designed to allow an inspector to immediately determine the integrity of the piping system.

(3) Except as provided for in § 281.30(a)(1) new or replaced petroleum piping must use interstitial monitoring within secondary containment in accordance with section 9003(i)(1) of the Solid Waste Disposal Act except when the state requires evidence of financial responsibility and certification in accordance with section 9003(i)(2) of the Solid Waste Disposal Act.

(e) *Requirements for hazardous substance UST systems*. All new hazardous substance UST systems must use interstitial monitoring within secondary containment of the tanks and the attached underground piping that conveys the regulated substance stored in the tank. For hazardous substance UST systems installed prior to [INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER], owners and operators can use another form of release detection if the owner and operator can demonstrate to the state (or the state otherwise determines) that another method will detect a release of the regulated substance as effectively as other methods allowed under the state program for petroleum UST systems and that effective corrective action technology is available for the hazardous substance being stored that can be used to protect human health and the environment.

§ 281.34 Release reporting, investigation, and confirmation.

In order to be considered no less stringent than the corresponding federal requirements for release reporting, investigation, and confirmation, the state must have requirements that ensure all owners and operators conform with the following:

(a) Promptly investigate all suspected releases, including:

(1) When unusual operating conditions, release detection signals and environmental conditions at the site suggest a release of regulated substances may have occurred or the interstitial space may have been compromised; and

(2) When required by the implementing agency to determine the source of a release having an impact in the surrounding area; and

(b) Promptly report all confirmed underground releases and any spills and overfills that are not contained and cleaned up.

(c) Ensure that all owners and operators contain and clean up unreported spills and overfills in a manner that will protect human health and the environment.

§ 281.35 - Release response and corrective action.

In order to be considered no less stringent than the corresponding federal requirements for release response and corrective action, the state must have requirements that ensure:

(a) All releases from UST systems are promptly assessed and further releases are stopped;

(b) Actions are taken to identify, contain and mitigate any immediate health and safety threats that are posed by a release (such activities include investigation and initiation of free product removal, if present);

(c) All releases from UST systems are investigated to determine if there are impacts on soil and groundwater, and any nearby surface waters. The extent of soil and groundwater contamination must be delineated when a potential threat to human health and the environment exists.

(d) All releases from UST systems are cleaned up through soil and groundwater

remediation and any other steps are taken, as necessary to protect human health and the environment;

(e) Adequate information is made available to the state to demonstrate that corrective actions are taken in accordance with the requirements of paragraphs (a) through (d) of this section. This information must be submitted in a timely manner that demonstrates its technical adequacy to protect human health and the environment; and

(f) In accordance with § 280.67, the state must notify the affected public of all confirmed releases requiring a plan for soil and groundwater remediation, and upon request provide or make available information to inform the interested public of the nature of the release and the corrective measures planned or taken.

§ 281.36 Out-of-service UST systems and closure.

In order to be considered no less stringent than the corresponding federal requirements for temporarily closed UST systems and permanent closure, the state must have requirements that ensure UST systems conform with the following:

(a) *Removal from service*. All new and existing UST systems temporarily closed must:

(1) Continue to comply with general operating requirements, release reporting and investigation, and release response and corrective action;

(2) Continue to comply with release detection requirements if regulated substances are stored in the tank;

(3) Be closed off to outside access; and

(4) Be permanently closed if the UST system has not been protected from corrosion and has not been used in one year, unless the state approves an extension after the owner and

operator conducts a site assessment.

(b) *Permanent closure of UST systems*. All tanks and piping must be cleaned and permanently closed in a manner that eliminates the potential for safety hazards and any future releases. The owner or operator must notify the state of permanent UST system closures. The site must also be assessed to determine if there are any present or were past releases, and if so, release response and corrective action requirements must be complied with.

(c) All UST systems taken out of service before the effective date of the federal regulations must permanently close in accordance with paragraph (b) of this section when directed by the implementing agency.

§ 281.37 Financial responsibility for UST systems containing petroleum.

(a) In order to be considered no less stringent than the federal requirements for financial responsibility for UST systems containing petroleum, the state requirements for financial responsibility for petroleum UST systems must ensure that:

(1) Owners and operators have $1 million per occurrence for corrective action and third-party claims in a timely manner to protect human health and the environment;

(2) Owners and operators not engaged in petroleum production, refining, and marketing and who handle a throughput of 10,000 gallons of petroleum per month or less have $500,000 per occurrence for corrective action and third-party claims in a timely manner to protect human health and the environment;

(3) Owners and operators of 1 to 100 petroleum USTs must have an annual aggregate of $1 million; and

(4) Owners and operators of 101 or more petroleum USTs must have an annual

aggregate of $2 million.

(b) States may allow the use of a wide variety of financial assurance mechanisms to meet this requirement. Each financial mechanism must meet the following criteria in order to be no less stringent than the federal requirements. The mechanism must: be valid and enforceable; be issued by a provider that is qualified or licensed in the state; not permit cancellation without allowing the state to draw funds; ensure that funds will only and directly be used for corrective action and third party liability costs; and require that the provider notify the owner or operator of any circumstances that would impair or suspend coverage.

(c) States must require owners and operators to maintain records that demonstrate compliance with the state financial responsibility requirements, and these records must be made readily available when requested by the implementing agency.

§ 281.38 Lender liability.

(a) A state program that contains a security interest exemption will be considered to be no less stringent than, and as broad in scope as, the federal program provided that the state's exemption:

(1) Mirrors the security interest exemption provided for in 40 CFR part 280, subpart I; or

(2) Achieves the same effect as provided by the following key criteria:

(i) A holder, meaning a person who maintains indicia of ownership primarily to protect a security interest in a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located, who does not participate in the management of the UST or UST system as defined under § 280.10 of this chapter, and who does not engage in petroleum production, refining, and marketing as defined under § 280.200(b) of this chapter is not:

(A) An “owner” of a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located for purposes of compliance with the requirements of 40 CFR part 280; or

(B) An “operator” of a petroleum UST or UST system for purposes of compliance with the requirements of 40 CFR part 280, provided the holder is not in control of or does not have responsibility for the daily operation of the UST or UST system.

(ii) [Reserved]

(b) [Reserved]

§ 281.39 Operator training.

In order to be considered no less stringent than the corresponding federal requirements for operator training, the state must have an operator training program that meets the minimum requirements of section 9010 of the Solid Waste Disposal Act.

Subpart D - Adequate Enforcement of Compliance

§ 281.40 Requirements for compliance monitoring program and authority.

(a) Any authorized representative of the state engaged in compliance inspections, monitoring, or testing must have authority to obtain by request any information from an owner or operator with respect to the UST system(s) that is necessary to determine compliance with the UST regulations.

(b) Any authorized representative of the state must have authority to require an owner or

operator to conduct monitoring or testing.

(c) Authorized representatives must have the authority to enter any site or premises subject to UST regulations or in which records relevant to the operation of the UST system(s) are kept, and to copy these records, obtain samples of regulated substances, and inspect or conduct the monitoring or testing of UST system(s).

(d) State programs must have procedures for receipt, evaluation, retention, and investigation of records and reports required of owners or operators and must provide for enforcement of failure to submit these records and reports.

(e)(1) State programs must have inspection procedures to determine, independent of information supplied by regulated persons, compliance with program requirements, and must provide for enforcement of failure to comply with the program requirements. States must maintain a program for systematic inspections of facilities subject to UST regulations in a manner designed to determine compliance or non-compliance, to verify accuracy of information submitted by owners or operators of regulated USTs, and to verify adequacy of methods used by owners or operators in developing that information.

(2) When inspections are conducted, samples taken, or other information gathered, these procedures must be conducted in a manner (for example, using proper "chain of custody" procedures) that will produce evidence admissible in an enforcement proceeding, or in court.

(f) Public effort in reporting violations must be encouraged and states must make available information on reporting procedures. State programs must maintain a program for investigating information obtained from the public about suspected violations of UST program requirements.

(g) The state must maintain the data collected through inspections and evaluation of records in such a manner that the implementing agency can monitor over time the compliance

status of the regulated community. Any compilation, index, or inventory of such facilities and activities shall be made available to EPA upon request.

§ 281.41 Requirements for enforcement authority.

(a) Any state administering a program must have the authority to implement the following remedies for violations of state program requirements:

(1) To restrain immediately and effectively any person by order or by suit in state court from engaging in any unauthorized activity that is endangering or causing damage to public health or the environment;

(2) To sue in courts of competent jurisdiction to enjoin any threatened or continuing violation of any program requirement;

(3) To assess or sue to recover in court civil penalties as follows:

(i) Civil penalties for failure to notify or for submitting false information pursuant to tank notification requirements must be capable of being assessed up to $5,000 or more per violation.

(ii) Civil penalties for failure to comply with any state requirements or standards for existing or new tank systems must be capable of being assessed for each instance of violation, up to $5,000 or more for each tank for each day of violation. If the violation is continuous, civil penalties shall be capable of being assessed up to $5,000 or more for each day of violation.

(4) To prohibit the delivery, deposit, or acceptance of a regulated substance into an underground storage tank identified by the implementing agency to be ineligible for such delivery, deposit, or acceptance in accordance with section 9012 of the Solid Waste Disposal Act.

(b) The burden of proof and degree of knowledge or intent required under state law for establishing violations under paragraph (a)(3) of this section, must be no greater than the burden of proof or degree of knowledge or intent that EPA must provide when it brings an action under Subtitle I of the Solid Waste Disposal Act.

(c) A civil penalty assessed, sought, or agreed upon by the implementing agency(ies) under paragraph (a)(3) of this section must be appropriate to the violation.

§ 281.42 Requirements for public participation.

Any state administering a program must provide for public participation in the state enforcement process by providing any one of the following three options:

(a) Authority that allows intervention analogous to Federal Rule 24(a)(2) from Title IV of the Federal Rules of Civil Procedure, and assurance by the state that it will not oppose intervention under the state analogue to Rule 24(a)(2) on the ground that the applicant's interest is adequately represented by the state.

(b) Authority that allows intervention of right in any civil action to obtain the remedies specified in § 281.41 by any citizen having an interest that is or may be adversely affected; or

(c) Assurance by the appropriate state agency that:

(1) It will provide notice and opportunity for public comment on all proposed settlements of civil enforcement actions (except where immediate action is necessary to adequately protect human health and the environment);

(2) It will investigate and provide responses to citizen complaints about violations; and

(3) It will not oppose citizen intervention when permissive intervention is allowed by statute, rule, or regulation.

§ 281.43 Sharing of information.

(a) States with approved programs must furnish EPA, upon request, any information in state files obtained or used in the administration of the state program. This information includes:

(1) Any information submitted to the state under a claim of confidentiality. The state must submit that claim to EPA when providing such information. Any information obtained from a state and subject to a claim of confidentiality will be treated in accordance with federal regulations in 40 CFR part 2; and

(2) Any information that is submitted to the state without a claim of confidentiality. EPA may make this information available to the public without further notice.

(b) EPA must furnish to states with approved programs, upon request, any information in EPA files that the state needs to administer its approved state program. Such information includes:

(1) Any information that is submitted to EPA without a claim of confidentiality; and

(2) Any information submitted to EPA under a claim of confidentiality, subject to the conditions in 40 CFR part 2.

Subpart E - Approval Procedures

§ 281.50 Approval procedures for state programs.

(a) The following procedures are required for all applications, regardless of whether the

application is for a partial or complete program, as defined in § 281.12.

(b) Before submitting an application to EPA for approval of a state program, the state must provide an opportunity for public notice and comment in the development of its underground storage tank program.

(c) When EPA receives a state program application, EPA will examine the application and notify the state whether its application is complete, in accordance with the application components required in § 281.20. The 180-day statutory review period begins only after EPA has determined that a complete application has been received.

(d) The state and EPA may by mutual agreement extend the review period.

(e) After receipt of a complete program application, the Administrator will tentatively determine approval or disapproval of the state program. EPA shall issue public notice of the tentative determination in the *Federal Register* and other mechanisms to attract state-wide attention. Notice of the tentative determination must also:

(1) Afford the public 30 days after the notice to comment on the state's application and the Administrator's tentative determination; and

(2) Include a general statement of the areas of concern, if the Administrator indicates the state program may not be approved; and

(3) Note the availability for inspection by the public of the state program application; and

(4) Indicate that a public hearing will be held by EPA no earlier than 30 days after notice of the tentative determination unless insufficient public interest is expressed, at which time the Regional Administrator may cancel the public hearing.

(f) Within 180 days of receipt of a complete state program application, the Administrator must make a final determination whether to approve the state program after review of all public

comments. EPA will give notice of its determination in the *Federal Register* and codify the approved state program. The notice must include a statement of the reasons for this determination and a response to significant comments received.

§ 281.51 Revision of approved state programs.

(a) Either EPA or the approved state may initiate program revision. Program revision may be necessary when the controlling federal or state statutory or regulatory authority is changed or when responsibility for the state program is shifted to a new agency or agencies. The state must inform EPA of any proposed modifications to its basic statutory or regulatory authority or change in division of responsibility among state agencies. EPA will determine in each case whether a revision of the approved program is required. Approved state programs must submit a revised application within three years of any changes to this part that requires a program revision.

(b) Whenever the Administrator has reason to believe that circumstances have changed with respect to an approved state program or the federal program, the Administrator may request, and the state must provide, a revised application as prescribed by EPA.

(c) The Administrator will approve or disapprove program revisions based on the requirements of this part and Subtitle I of the Solid Waste Disposal Act pursuant to the procedures under this section, or under § 281.50 if EPA has reason to believe the proposed revision will receive significant negative comment from the public.

(1) The Administrator must issue public notice of planned approval or disapproval of a state program revision in the *Federal Register* and other mechanisms to attract state-wide attention. The public notice must summarize the state program revision, indicate whether EPA

intends to approve or disapprove the revision, and provide for an opportunity to comment for a period of 30 days.

(2) The Administrator's decision on the proposed revision becomes effective 60 days after the date of publication in the *Federal Register* in accordance with paragraph (c)(1) of this section, unless significant negative comment opposing the proposed revision is received during the comment period. If significant negative comment is received, EPA must notify the state and within 60 days after the date of publication, publish in the *Federal Register* either:

(i) A withdrawal of the immediate final decision, which will then be treated as a tentative decision in accordance with the applicable procedures of § 281.50(e) and (f); or

(ii) A notice that contains a response to significant negative comments and affirms either that the immediate final decision takes effect or reverses the decision.

(d) Revised state programs that receive approval must be codified in the *Federal Register*.

Subpart F - Withdrawal of Approval of State Programs

§ 281.60 Criteria for withdrawal of approval of state programs.

The Administrator may withdraw program approval when the Agency determines that a state no longer has adequate regulatory or statutory authority or is not administering and enforcing an approved program in accordance with this part. The state must have adequate capability to administer and enforce the state program. In evaluating whether such capability exists, the Agency will consider whether the state is implementing an adequate enforcement program by evaluating the quality of compliance monitoring and enforcement actions.

§ 281.61 Procedures for withdrawal of approval of state programs.

(a) The following procedures apply when a state with an approved program voluntarily transfers to EPA those program responsibilities required by federal law.

(1) The state must give EPA notice of the proposed transfer, and submit, at least 90 days before the transfer, a plan for the orderly transfer of all relevant program information necessary for EPA to administer the program.

(2) Within 30 days of receiving the state's transfer plan, EPA must evaluate the plan and identify any additional information needed by the federal government for program administration.

(3) At least 30 days before the transfer is to occur, EPA must publish notice of the transfer in the *Federal Register* and other mechanisms to attract state-wide attention.

(b) The following procedures apply when the Administrator considers withdrawing approval.

(1) When EPA begins proceedings to determine whether to withdraw approval of a state program (either on its own initiative or in response to a petition from an interested person), withdrawal proceedings will be conducted in accordance with procedures set out in 40 CFR 271.23(b) and (c), except for § 271.23(b)(8)(iii) to the extent that it deviates from requirements under § 281.60.

(2) If the state fails to take appropriate action within a reasonable time, not to exceed 120 days after notice from the Administrator that the state is not administering and enforcing its program in accordance with the requirements of this part, EPA will withdraw approval of the state's program.

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