Protection of Children

We have analyzed this proposed rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

Indian Tribal Governments

This proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

Energy Effects

We have analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a “significant energy action” under that order because it is not a “significant regulatory action” under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Information and Regulatory Affairs has not designated it as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

Technical Standards

The National Technology Transfer and Advancement Act (NTTAA) (15 U.S.C. 272 note) directs agencies to use voluntary consensus standards in their regulatory activities unless the agency provides Congress, through the Office of Management and Budget, with an explanation of why using these standards would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., specifications of materials, performance, design, or operation; test methods; sampling procedures; and related management systems practices) that are developed or adopted by voluntary consensus standards bodies.

This proposed rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

Environment

We have analyzed this proposed rule under Commandant Instruction M16475.1D and Department of Homeland Security Management Directive 5100.1, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f), and have concluded that there are no factors in this case that would limit the use of a categorical exclusion under section 2.B.2 of the Instruction. Therefore, we believe this proposed rule should be categorically excluded, under figure 2–1, paragraph (32)(e) of the Instruction, from further environmental documentation. Under figure 2–1, paragraph 32(e) of the instruction, an "Environmental Analysis Checklist" and a "Categorical Exclusion Determination" are not required for this rule. However, comments on this section will be considered before the final rule.

List of Subjects in 33 CFR Part 117
Bridges.

Regulations

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 117 as follows:

PART 117—DRAWBRIDGE OPERATION REGULATIONS

§117.899 Youngs Bay and Lewis and Clark River.

(a) The draw of the US101 (New Youngs Bay) highway bridge, mile 0.7 across Youngs Bay at Smith Point shall open on signal for the passage of vessels if notice is given at least one half-hour in advance to the drawtender at the Lewis and Clark River Bridge by marine radio, telephone, or other suitable means from 7 a.m. to 5 p.m. Monday through Friday, and from 8 a.m. to 4 p.m. on Saturday and Sunday. At all other times, including all federal holidays except Columbus Day, notice is required by telephone at least two hours in advance. The opening signal shall be two prolonged blasts followed by one short blast.

(b) The draw of the Oregon State (Old Youngs Bay) highway bridge, mile 2.4, across Youngs Bay at the foot of Fifth Street, shall open on signal for the passage of vessels if notice is given at least one half-hour in advance to the drawtender at the Lewis and Clark River Bridge by marine radio, telephone, or other suitable means from 7 a.m. to 5 p.m. Monday through Friday and from 8 a.m. to 4 p.m. Saturday and Sunday. At all other times, including all federal holidays except Columbus Day, notice is required by telephone at least two hours in advance. The opening signal is two prolonged blasts followed by one short blast.

(c) The draw of the Oregon State (Lewis and Clark River) highway bridge, mile 1.0, across the Lewis and Clark River, shall open on signal for the passage of vessels if notice is given at least one half-hour in advance by marine radio, telephone, or other suitable means from 7 a.m. to 5 p.m. Monday through Friday and from 8 a.m. to 4 p.m. on Saturday and Sunday. At all other times, including all federal holidays except Columbus Day, notice is required by telephone at least two hours in advance. The opening signal is one prolonged blast followed by four short blasts.


R.R. Houck,
Rear Admiral, U.S. Coast Guard, District Commander, Thirteenth Coast Guard District.

[FR Doc. E6–17971 Filed 10–26–06; 8:45 am]
BILLING CODE 4910–15–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Medicare & Medicaid Services

42 CFR Part 483

[CMS–3191–P]

RIN 0938–AN79

Medicare and Medicaid Programs; Fire Safety Requirements for Long Term Care Facilities, Automatic Sprinkler Systems

AGENCY: Centers for Medicare & Medicaid Services (CMS), HHS.

ACTION: Proposed rule.

SUMMARY: This proposed rule would require all long term care facilities to be equipped with sprinkler systems. This proposed rule especially requests public comments on the duration of a phase-in period to allow long term care facilities to install such systems.

DATES: To be assured consideration, comments must be received at one of the addresses provided below, no later than 5 p.m. on December 26, 2006.
ADDITIONAL INFORMATION: In commenting, please refer to file code CMS–3191–P. Because of staff and resource limitations, we cannot accept comments by facsimile (fax) transmission.

You may submit comments in one of four ways (no duplicates, please):

1. You may submit electronic comments on specific issues in this regulation to http://www.cms.hhs.gov/effrulemaking. Click on the link “Submit electronic comments on CMS regulations with an open comment period.” (Attachments should be in Microsoft Word, WordPerfect, or Excel; however, we prefer Microsoft Word.)
2. By regular mail. You may mail written comments (one original and two copies) to the following address ONLY:
       Centers for Medicare & Medicaid Services, Department of Health and Human Services, Attention: CMS–3191–P, P.O. Box 8012, Baltimore, MD 21244–8012.

   Please allow sufficient time for mailed comments to be received before the close of the comment period.

3. By hand or courier. If you prefer, you may deliver (by hand or courier) your written comments (one original and two copies) before the close of the comment period to one of the following addresses. If you intend to deliver your comments to the Baltimore address, please call telephone number (410) 786–9994 in advance to schedule your arrival with one of our staff members.
       Room 445, Hubert H. Humphrey Building, 200 Independence Avenue, SW., Washington, DC 20201; or 7500 Security Boulevard, Baltimore, MD 21244–1850.

4. By express or overnight mail. You may send written comments (one original and two copies) to the following address only:

   3. By hand or courier. If you prefer, you may deliver (by hand or courier) your written comments (one original and two copies) before the close of the comment period to one of the following addresses. If you intend to deliver your comments to the Baltimore address, please call telephone number (410) 786–9994 in advance to schedule your arrival with one of our staff members.

   (Because access to the interior of the HHH Building is not readily available to persons without Federal Government identification, commenters are encouraged to leave their comments in the CMS drop slots located in the main lobby of the building. A stamp-in clock is available for persons wishing to retain a proof of filing by stamping in and retaining an extra copy of the comments being filed.)

   Comments mailed to the addresses indicated as appropriate for hand or courier delivery may be delayed and received after the comment period.

Submission of Comments: You may submit comments on this document’s paperwork requirements by mailing your comments to the addresses provided at the end of the “Collection of Information Requirements” section in this document.

For information on viewing public comments, see the beginning of the SUPPLEMENTARY INFORMATION section.

FOR FURTHER INFORMATION CONTACT:

Danielle Shearer, (410) 786–6617; James Merrill, (410) 786–6998; Jeannie Miller, (410) 786–3164; or Rachael Weinstein, (410) 786–6775.

SUPPLEMENTARY INFORMATION:

Submitting Comments: We welcome comments from the public on all issues set forth in this rule to assist us in fully considering issues and developing policies. You can assist us by referencing the file code CMS–3191–P and the specific “issue identifier” that precedes the section on which you choose to comment.

Inspection of Public Comments: All comments received before the close of the comment period are available for viewing by the public, including any personally identifiable or confidential business information that is included in a comment. We post all comments received before the close of the comment period on the following Web site as soon as possible after they have been received: http://www.cms.hhs.gov/effrulemaking. Click on the link “Electronic Comments on CMS Regulations” on that Web site to view public comments.

Comments received timely will also be available for public inspection as they are received, generally beginning approximately 3 weeks after publication of a document, at the headquarters of the Centers for Medicare & Medicaid Services, 7500 Security Boulevard, Baltimore, Maryland 21244, Monday through Friday of each week from 8:30 a.m. to 4 p.m. To schedule an appointment to view public comments, phone 1–800–743–3951.

I. Background

[If you choose to comment on issues in this section, please indicate the caption “Background” at the beginning of your comment.]

The Life Safety Code (LSC), published by the National Fire Protection Association (NFPA), a private, nonprofit organization dedicated to reducing loss of life due to fire, is a compilation of fire safety requirements. The LSC contains fire safety requirements for both new and existing buildings. It is updated through a consensus process and generally published every 3 years. Sections 1819(d)(2) and 1919(d)(2) of the Social Security Act (the Act) require that long term care facilities participating in the Medicare and Medicaid programs meet the provisions of the edition of the LSC that is adopted by the Secretary.

Beginning with the adoption of the 1967 edition of the LSC in 1971, Medicare and Medicaid regulations have historically incorporated the LSC requirements by reference for all long term care facilities as well as other providers, while providing the opportunity for a Secretarial waiver of a requirement under certain circumstances. The statutory basis for incorporating NFPA’s LSC for our other providers is under the Secretary’s general rulemaking authority at sections 1102 and 1871 of the Act, and under provider-specific provisions of title XVIII that permit us to issue regulations to protect the health and safety of participants in Medicare and Medicaid. We adopted the LSC to ensure that patients and residents are consistently protected from fire, regardless of the location in which they receive care. Since adopting and enforcing the 1967 and subsequent editions of the LSC, there has been a significant decline in the number of multiple death fires, indicating that the LSC has been effective in improving fire safety in health care facilities.

On October 26, 2001, we published a proposed rule (66 FR 54179), and on January 10, 2003, we published a final rule in the Federal Register, entitled “Fire Safety Requirements for Certain Health Care Facilities” (68 FR 1374). In the final rule, we adopted the 2000 edition of the LSC provisions as the standard governing Medicare and Medicaid health care facilities, including long term care facilities. The final rule required all existing long term care facilities to comply with the 2000 edition of the LSC.

The 2000 edition of the LSC required all newly constructed buildings containing health care facilities to have an automatic sprinkler system installed throughout the building. However, like all previous editions, the LSC did not require existing buildings to install automatic sprinkler systems throughout if they met certain construction standards, ranging from the size of the buildings to the types of material used in their construction.

In accordance with the 2000 edition of the LSC, an existing building that meets the above-mentioned construction standards must install sprinklers if it undergoes a major renovation. However, in such cases, it is only required to install sprinklers in the renovated section(s). Therefore, a building may only be sprinklered on one floor or one
in date of the sprinkler requirement. For example, if all facilities were required to have sprinklers installed throughout their buildings by March 25, 2016, then the sunset date of the smoke alarms requirement in paragraph (a)(7)(iv) would be March 25, 2016. We believe this would reduce burden and confusion for long term care providers.

[If you choose to comment on issues in this section, please include the caption “GAO Report” at the beginning of your comments.]

A recent Government Accountability Office (GAO) report entitled “Nursing Home Fire Safety: Recent Fires Highlight Weaknesses in Federal Standards and Oversight” (GAO–04–660, July 16, 2004, http://www.gao.gov/new.items/d04660.pdf) examined two long term care facility fires (Hartford and Nashville) in 2003 that resulted in 31 total resident deaths. The report examined Federal fire safety standards and enforcement procedures, as well as results from the fire investigations of these two incidents. The report recommended that fire safety standards for unsprinklered facilities be strengthened and cited sprinklers as the single most effective fire protection feature for long term care facilities.

In response to a recommendation made in the GAO report, on March 25, 2005, we published an interim final rule with comment period in the Federal Register entitled, “Fire Safety Requirements for Certain Health Care Facilities; Amendment” (70 FR 15229). This interim final rule added paragraph (a)(7) to §483.70, to require long term care facilities, at minimum, to install battery-operated smoke detectors in resident sleeping rooms and public areas, unless they have a hard-wired smoke detector system in resident rooms and public areas or a sprinkler system installed throughout the facility. Numerous public comments regarding this regulation indicated that the proper term for the fire safety device we described is “smoke alarms” rather than “smoke detectors.” Therefore, we will refer to these fire safety devices as “smoke alarms.” The final rule “Fire Safety Requirements for Certain Health Care Facilities; Amendment” also will reflect this terminology change.

Paragraph (a)(7) would be rendered moot by this proposed rule because all facilities would be required to have sprinklers throughout their buildings and would thus fall under one of the two exceptions noted above. For this reason, we are proposing to add a sunset provision to paragraph (a)(7). The sunset date for proposed paragraph (a)(7)(iv) in §483.70 would correspond to the phase-

Automatic sprinkler systems are effective in reducing the risk of fatalities due to fire because they limit the size of a developing fire and prevent the fire from growing and spreading beyond the area where the fire ignited. Limiting the size of a fire and preventing it from growing and spreading results in a smaller number of individuals who are threatened by the fire. In addition, impeding the fire’s growth gives the facility staff and residents and the local fire department more time to respond to the situation.

Automatic fire suppression through sprinklers also alleviates some of the current heavy reliance on facility staff to implement the facility’s emergency plan. Fires often occur at night, as both the Hartford and Tennessee fires did, when staffing levels are lowest. Investigators of the Hartford fire determined that the facility’s staff did not fully implement the facility’s emergency plan, and that may have contributed to the number of fatalities in that fire. The 2004 GAO report concluded that, “reliance on staff response as a key component of fire protection may not always be realistic, particularly in an unsprinklered facility.” Limiting the area of a building affected by a fire may result in less of a need to evacuate or relocate residents, thus eliminating some of the heavy reliance on facility staff response.

The effectiveness of automatic sprinkler systems has prompted some States, including Virginia, Connecticut, and Tennessee, to require that all long term care facilities have sprinklers. The NFPA also requires all long term care facilities to have automatic sprinkler systems as part of the 2006 edition of the LSC. The American Health Care Association (AHCA), one of the largest long term care facility provider organizations, supports installing sprinkler systems in all long term care facilities, and worked with the NFPA on the provisions of the 2006 LSC.

[If you choose to comment on issues in this section, please include the caption “CMS Action” at the beginning of your comments.]
We support the NFPA in its decision to include an automatic sprinkler system requirement for all long term care facilities in the 2006 edition of the LSC. We have decided to proceed with this rule, without adopting the NFPA 2006 edition of the LSC, because we want to avoid further delay in requiring an automatic sprinkler system in long term care facilities. As the 2003 fires demonstrated, there is a significant need to improve fire safety in long term care facilities in a timely manner. To adopt the 2006 edition of the LSC, we are required to go through notice and comment rulemaking. In addition to the time that it takes to carefully analyze the LSC in its entirety, the rulemaking process itself is a time-consuming process that, even in the best case scenario, takes 18 months to complete. Given the large scope of the LSC, it is probable that it would take even longer to complete the full rulemaking process. Therefore, it is probable that we would not be able to adopt and enforce compliance with the 2006 edition of the LSC until 2008 or 2009. In addition, the 2008 or 2009 publication date of a final rule would simply begin a probable phase-in period, which could be anywhere from 3 to 10 additional years. We believe that delaying the rulemaking process would be a disservice to all long term care facility residents who reside in buildings that do not have sprinklers. Therefore, we have decided at this time to proceed with rulemaking that does not include adoption of the NFPA 2006 LSC.

We will continue to work with the NFPA to revise and refine each edition of the LSC. We are currently examining the 2006 edition of the LSC in its entirety and exploring the possibility of adopting it for all Medicare and Medicaid participating health care facilities. We are soliciting public comment about our decision to proceed with rulemaking separate from the 2006 LSC. In addition, we may make changes regarding our decision to regulate the installation requirement. We are also soliciting public comment regarding our decision to regulate the installation of automatic sprinkler systems through Federal rulemaking rather than deerring to State and local jurisdictions. There has been discussion within the larger long term care community about the advantages and disadvantages of deferring to State and local jurisdictions.

II. Provisions of the Proposed Regulations

For the reasons described in section I of this preamble, we are proposing a rule with three main components. First, the regulation proposes to add a sunset provision to paragraph (a)(7) in §484.70 that would correspond to the phase-in date of the sprinkler requirement. This sunset provision would provide that, as of the phase-in date, we would no longer enforce the requirement that facilities have and maintain at least battery-operated smoke alarms. Second, this regulation proposes to require every long term care facility to install an approved, supervised automatic sprinkler system in accordance with the 1999 edition of NFPA 13, Standard for the Installation of Sprinkler Systems. Throughout the facility if it does not have such a system already. Third, the regulation proposes to require every long term care facility to test, inspect, and maintain an approved, supervised automatic sprinkler system in accordance with the 1998 edition of NFPA 25, Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems. The proposed requirements of this regulation include three technical terms: “approved,” “automatic,” and “supervised.” These terms are terms of art in the fire safety community and are included in NFPA 101, Life Safety Code, with which long term care facilities must already comply. There may be, however, individuals who are not familiar with the terms. Their definitions are as follows:

- **Approved** means acceptable to the authority having jurisdiction.
- **Automatic** means that which provides a function without the necessity of human intervention.
- **Supervised** means that the system and particular components of the system are monitored by a device with auditory and visual signals that are capable of alerting facility staff should the system or one of its components become inoperable for any reason.

The following section describes each of the main components.

A. Sunset Provision

[If you choose to comment on issues in this section, please include the caption “Installation” at the beginning of your comments.]

We are proposing in §483.70(a)(7)(iv) to add a sunset provision for smoke alarms that would correspond to the phase-in date of the sprinkler installation requirement. We are proposing to add this provision because otherwise paragraph (a)(7) would be rendered moot by this proposed rule. Paragraph (a)(7) requires long term care facilities to have at least battery-operated smoke alarms in resident rooms and common areas. Facilities that are fully sprinklered in accordance with NFPA 13 are exempt from the smoke alarm requirement. Once all facilities install sprinkler systems in accordance with the 1999 edition of NFPA 13, as we are proposing to require, all facilities would be exempt from the requirements of paragraph (a)(7). We believe that it is proper to state, in regulation, that the smoke alarm requirement would cease to be effective upon the phase-in date of the sprinkler requirement. Therefore, we propose to add a sunset provision to the smoke alarm requirement.

B. Installation

[If you choose to comment on issues in this section, please include the caption “Installation” at the beginning of your comments.]

We are proposing in §483.70(a)(8)(i) to require long term care facilities to install approved, supervised automatic sprinkler systems throughout their facilities in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems (which we would incorporate by reference). If a long term care facility was part of another building, such as a hospital, then the building would be required only to have sprinklers in the long term care facility section. The NFPA 13 specifies how to properly design and install sprinkler systems using the proper components. The standards of NFPA 13 cover a wide variety of factors that are involved in designing and installing sprinkler systems. The NFPA 13 is divided into 10 main chapters governing the design and installation phases of automatic sprinkler systems. They are as follows:

- **General Information.**
- **Classification of Occupancies and Commodities.**
- **System Components and Hardware.**
- **System Requirements.**
- **Installation Requirements.**
- **Hanging, Bracing, and Restraint of System Piping.**
- **Design Approaches.**
- **Plans and Calculations.**
- **Water Supplies.**
- **System Acceptance.**

The NFPA 13 is a very detailed document, with a wide variety of standards and exceptions to those standards. The document provides many options for the design and installation of sprinkler systems so that...
each system may be tailored to the building in which it is installed. It is not practical to discuss each and every standard of NFPA 13 in this proposed rule. The technical standards of NFPA 13, along with helpful background and explanatory text, are in the Automatic Sprinkler System Handbook, published by the National Fire Protection Association (8th edition. Puchovsky, Milosh T., Ed.; 1999, Quincy, MA). The Automatic Sprinkler System Handbook contains more than 1,000 pages of information and provides far more information than this proposed rule. Therefore, the following section will only briefly discuss the general content of each design and installation-related chapter of NFPA 13, to provide an overview of the factors that facilities would be required to address when designing and installing an automatic sprinkler system.

Chapter 1, General Information, discusses four separate areas. First, it describes the scope of NFPA 13. According to the Automatic Sprinkler System Handbook, NFPA 13 provides the minimum requirements for sprinkler systems to operate during a fire. These requirements focus on the design and installation of sprinkler systems that use automatic or open sprinklers that discharge water to suppress or control a fire.

Second, chapter 1 describes the purpose of NFPA 13. The NFPA 13 focuses on the technical aspects of the design and installation of sprinkler systems in order to standardize these areas “based on solid engineering principles, test data, and field experience.” The purpose of NFPA 13 is to ensure through standardization that sprinkler systems, when designed and installed in buildings, are designed, assembled, and installed in a safe and effective manner using the correct materials (for instance, pipes) and information (for instance, system diagrams).

Third, chapter 1 defines important terms that are used throughout the document. Frequently, the terms used in NFPA 13 are specific to sprinkler systems, and their definitions may not be available in other resources. To avoid any possible confusion, NFPA 13 provides an inclusive list of terms and their definitions as they apply to sprinkler systems. This list is one way in which NFPA 13 standardizes sprinkler system requirements.

Finally, chapter 1 addresses the level of protection that sprinkler systems are expected to provide. Chapter 1–6.1 states that “Sprinkler systems, where protected by an automatic sprinkler system installation, shall be provided with sprinklers in all areas.” The success of a sprinkler system depends, in large part, on how large a fire is when it first begins and the initial sprinklers are activated. If a fire begins in a sprinklered area, then the sprinklers would quickly be activated, spraying water on the fire and surrounding areas. These procedures would prevent the fire from expanding and would therefore protect the occupants of the building. Conversely, if a fire begins in one part of a building where there are no sprinklers, then it would be allowed to grow due to the lack of sprinklers. Once the fire reached an area with sprinklers, the fire would likely be too large for the sprinklers to control. Sprinkler systems are not intended to prevent a fire in an unsprinklered area from spreading to a sprinklered area. Therefore, NFPA 13 requires that sprinklers be installed throughout a building. If there is a 2-hour fire wall separating the section of a building that contains a long term care facility from the rest of the building, then the long term care facility section is considered to be its own building. This means that we require only the long term care facility section to have sprinklers installed throughout. If there is no 2-hour fire wall separating the long term care facility from the rest of the building, then the long term care facility could choose to install a 2-hour fire wall separation or sprinkler the entire building.

Chapter 2, Classification of Occupancies and Commodities, is divided into two sections, one for occupancies and the other for commodities. Sprinkler systems are designed using a variety of methods and components within the requirements of NFPA 13. The choice of design method and components is based on how the building is used. Chapter 2 identifies the general occupancies and their fire risk levels. It also identifies the many different types of items that are stored in buildings. These broad classifications of occupancies and commodities enable sprinkler system designers to tailor the systems to the particular fire safety needs of each building. The classifications also help ensure that all buildings, regardless of their differences, are fully protected by appropriate sprinkler systems.

Chapter 3, System Components and Hardware, contains the general requirements for the pieces that are used to create a sprinkler system. First and foremost, NFPA 13 requires that the system components be listed. This provision requires that the components used to build a sprinkler system be on a list published by an organization that periodically inspects the products on the list. The list states that the component meets appropriate designated standards or has been tested and found suitable for a specific purpose. Using listed components helps ensure that the components, and thus the system, are effective and reliable in the event of a fire.

This chapter also covers the basic requirements for sprinkler system components. It requires that sprinklers have certain specified discharge and temperature characteristics. The chapter also requires that facilities maintain a sufficient number of replacement sprinklers for each type of sprinkler used in the facility. In addition to being properly maintained, sprinklers may need to be replaced. It is important that a facility have enough sprinklers in its possession in order to replace any sprinklers immediately, so as not to compromise the effectiveness and reliability of the entire system in the event of a fire.

Chapter 3 also contains requirements for escutcheon plates, guards, shields, aboveground pipes and tubes, underground pipes, fittings, joinings, hangers, valves, fire department connections, waterflow alarms, and any coatings that are on system components. All of the requirements included in chapter 3 of NFPA 13 exist to ensure that the components used to construct sprinkler systems will operate as needed in the event of a fire. Some of the above listed components, such as pipes, are also addressed in other chapters of NFPA 13.

Chapter 4, System Requirements, is divided into requirements for the different types of sprinkler systems that may be used in a facility. The two main categories of sprinkler systems are wet and dry pipe systems. Wet pipe systems are, in the most general terms, systems in which the pipes contain water. When the heat from a fire triggers the sprinklers, the water is immediately discharged. Dry pipe systems are filled with air or nitrogen, rather than water. When the air or nitrogen is released, the water flows into the pipes and out through the sprinklers. Within these two broad sprinkler system categories, each of which provides an equal level of fire protection, NFPA 13 addressed many variations that sprinkler system designers may use to address the needs of a particular building. The NFPA 13 leaves the choice of which system type and variation to use for each building to the sprinkler system designer. This flexibility helps ensure that the sprinkler system fully addresses the unique needs of the building and its occupants, thereby ensuring that the
building is optimally protected by its sprinkler system.

Chapter 5, Installation Requirements, contains the requirements for the normal arrangement of sprinkler system components. The actual layout of a specific sprinkler system may differ from the normal layout described in this chapter of NFPA 13 based on the available water supply, type of sprinkler, building construction features, and other considerations. However, the basic layout principles of this chapter, such as the position and location of sprinklers and valves, would still apply. Chapter 5 helps ensure that facilities are adequately protected by providing the minimum and maximum limits for sprinkler system components. Within this minimum-maximum range, system designers have the flexibility to address the fire-safety needs of each facility.

This chapter includes the specific requirements for the many different types of sprinklers. It covers sprinklers ranging from standard pendent and upright spray sprinklers to early suppression fast-response sprinklers. Each sprinkler type has advantages and disadvantages depending on the circumstances under which it is used. The sprinkler type that may be appropriate for one facility may not be appropriate for another. Therefore, NFPA 13 includes requirements for all sprinkler types so that sprinkler system designers have the flexibility to properly utilize the right sprinkler type for the job.

This chapter also includes requirements for specialized facilities, such as those that store flammable and combustible materials. These requirements would not pertain to long term care facilities because health care occupancies are considered to be light hazards. As described in chapter 5, light hazard buildings are not included in the specialized facilities.

Chapter 6, Hanging, Bracing, and Restraint of System Piping, contains the requirements for the structural issues that are related to installing sprinkler piping systems. It identifies acceptable types of hangers, how those hangers are installed, how fire main joints are restrained, and how pipes are protected in areas where earthquakes occur. It is important to ensure that sprinkler system components are properly hung. If they are improperly hung, then they may randomly fall down and injure someone. In addition, improperly hung components may fall under the pressure of water flowing through them during a fire situation, thus disabling the sprinkler system and allowing the fire to grow.

Chapter 7, Design Approaches, addresses the minimum amount of water necessary to effectively control or suppress a fire. This chapter requires that water demands will be determined using the occupancy hazard fire control approach and permits special design approaches to allow for the use of non-standard components such as early suppression fast-response sprinklers. Facilities are required to ensure that there is a sufficient amount of water to control or suppress a fire.

Chapter 8, Plans and Calculations, is an extension of chapter 7 that focuses on the specific methodologies that can be used to calculate and verify a sprinkler system’s hydraulic demand and its available water supply. Properly calculating these values is a crucial step in ensuring that the system has adequate pressure and water to control or suppress a fire. If a value is not properly calculated and, for example, there is not enough water available for a sprinkler system to fully control a fire, then the fire would be allowed to grow and spread to other areas. The growth of the fire would jeopardize the safety of the building’s occupants.

This chapter also requires that preliminary sprinkler system plans be submitted for review to the authority having jurisdiction for several reasons. First, submitting the plans before construction begins would help ensure that the plans meet all requirements, thus avoiding changes at a later date. Also, submitting the plans for review may help ensure that there are no errors. A person who is not familiar with the plan brings a fresh perspective and may be able to more easily spot errors. Finally, submitting plans early helps to avoid misunderstandings. It is often difficult to verbally describe how a system would be constructed and how it would function. A visual layout, which is already required by most authorities having jurisdiction, would aid in communication and understanding between all parties, including the designer, the authority having jurisdiction, and the construction personnel.

Chapter 9, Water Supplies, further expands on the areas that are related to ensuring that a sprinkler system has adequate water to control or suppress a fire. It addresses situations where a facility may not have an adequate municipal water supply. Facilities may need to install a pump to increase water pressure and a tank to store extra water to compensate for an inadequate municipal water supply. This chapter includes the requirements that these additional components would need to meet and addresses their proper use in a sprinkler system.

Chapter 10, Systems Acceptance, requires that sprinkler systems, once constructed, be tested. System testing is done in order to verify that the basic requirements of all of the previous chapters of NFPA 13 are satisfied, that the construction of the system is satisfactory, and that the system performs as intended. During a system test, facilities are required to examine pipes, pipe joints, alarms, and other components to ensure that they are properly installed and that they are in working order.

We would require that all long term care facilities that do not already have an automatic sprinkler system installed throughout the building install such a system in accordance with all of the requirements NFPA 13, including but not exclusive to those described above.

C. Phase-In

[If you choose to comment on issues in this section, please include the caption “Phase-in” at the beginning of your comments.]

We are soliciting public comment regarding an appropriate phase-in timeframe for the installation of an automatic sprinkler system. Such a timeframe should provide for this additional fire protection feature as quickly as possible without undue burden on long term care facilities.

We are soliciting public comment regarding a phase-in period for this requirement because we believe that it would require a substantial amount of time for a facility to plan and install an automatic sprinkler system. A facility would likely decide to use the services of a fire safety consultant to design a system that met its needs. Simply securing these services could be a time-consuming process. In addition, a facility would probably need to reallocate its resources and possibly secure additional capital resources to implement this requirement. This part of the preparation would also take a substantial amount of time to complete. After preparing for the installation, a facility would actually have to install the system. Installation may require removing ceilings, cutting walls, and numerous other construction tasks. Installation may also require temporarily relocating residents, either within the facility or to another facility, while the sprinkler system was being installed. We believe that most facilities would choose to install sprinklers in their existing facility, and would therefore go through this preparation and implementation process.
However, there may be some facilities that choose to relocate to a building that already has a sprinkler system installed throughout the building. These facilities may have planned to relocate to another building for reasons unrelated to the proposed sprinkler requirement. The decision to move, however, may be prompted by the proposed requirements. For some facilities it may be easier to move rather than to install such a system in their current location. Locating, purchasing or constructing, and moving a facility would be a lengthy process. A phase-in period, we believe, would allow facilities that choose to relocate to a sprinklered building the chance to do so instead of installing sprinklers in an existing building.

Given these considerations, we believe that requiring a long term care facility to install an automatic sprinkler system throughout its building requires a phase-in period. We would encourage facilities that were able to install an automatic sprinkler system to do so as soon as possible, rather than delay the project until the effective date of a phase-in period drew near.

D. Maintenance

[If you choose to comment on issues in this section, please include the caption “Maintenance” at the beginning of your comments.]

We are proposing in §483.70(a)(8)(ii) to require that all long term care facilities test, inspect, and maintain an approved, supervised automatic sprinkler system in accordance with the 1998 edition of NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, which we propose to incorporate by reference. Proper inspections, tests, and maintenance of sprinkler systems are critical to ensuring that sprinkler systems function properly on a continuous basis. Fires are, by nature, unpredictable, and sprinkler systems must be operable at all times to ensure that buildings are protected whenever and wherever fires occur.

National Fire Protection Association 25 covers a wide variety of testing, inspection, and maintenance requirements for the numerous types of sprinkler systems that facilities may install and the auxiliary equipment that may be necessary for some facilities. The general contents of the chapters of NFPA 25 are as follows: Chapter 1, General Information, describes the scope of the document; describes and defines key ideas and terms; requires that certain records of inspections, tests, and maintenance activities be maintained; states who is responsible for ensuring that all inspection, testing, and maintenance duties are performed and that all inspection, testing, and maintenance activities be conducted in a safe manner.

- Chapters 2, Sprinkler Systems; 3, Standpipe and Hose Systems; 7, Water Spray Fixed Systems; and 8, Foam-Water Sprinkler Systems, address the specific inspection, testing, and maintenance requirements for the different types of sprinkler systems that facilities may use, based upon their needs and circumstances.
- Chapter 9, Valves, Valve Components, and Trim, focuses on the inspection, testing, and maintenance of the valves, valve components, and trim that are used to construct these systems.
- Chapters 4, Private Fire Service Mains; 5, Fire Pumps, and 6, Water Storage Tanks, address the inspection, testing, and maintenance requirements for auxiliary equipment that may be necessary for a particular facility.
- Chapter 10, Obstruction Investigation, provides the minimum requirements for conducting investigations of possible sources of materials that can block pipes and prevent them from operating properly.
- Chapter 11, Impairments, assures that adequate measures are taken when a sprinkler system is wholly or partially shutdown, either on an emergency or preplanned basis, to ensure that increased fire safety risks are minimized and that the shutdown is as short in duration as possible.
- Chapter 12, Referenced Publications, provides a list of other NFPA publications that are referred to within NFPA 25.

Facilities would be required by this proposed rule to comply with all applicable chapters of NFPA 25 once they had installed their sprinkler systems in accordance with the requirements of NFPA 13.

III. Collection of Information Requirements

Under the Paperwork Reduction Act of 1995, we are required to provide 60-day notice in the Federal Register and solicit public comment before a collection of information requirement is submitted to the Office of Management and Budget (OMB) for review and approval. In order to fairly evaluate whether an information collection should be approved by OMB, section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995 requires that we solicit comment on the following issues:

- The accuracy of our estimate of the information collection burden.
- The quality, utility, and clarity of the information to be collected.
- Recommendations to minimize the information collection burden on the affected public, including automated collection techniques.

We are soliciting public comment on each of these issues for the following sections of this document that contain information collection requirements:

In summary, §483.70(a)(8)(ii) requires that all long term care facilities test, inspect, and maintain an approved, supervised automatic sprinkler system in accordance with the 1998 edition of NFPA 25. Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. This section states that facilities would be required by this proposed rule to comply with all applicable chapters of NFPA 25 once they have installed their sprinkler systems in accordance with the requirements of NFPA 13.

We believe that facilities would utilize the services of a contractor for all inspection, testing, and maintenance activities, including documentation of those activities. Therefore, no burden would be associated with the development of the documentation. There would, however, be a burden associated with the time and effort required by facilities to maintain documentation of inspections, tests, and maintenance activities in accordance with the standards outlined in the NFPA 25. This burden would be the time it takes to file the documentation.

The burden associated with these requirements is estimated to be 1 hour per long term care facility. Therefore, we estimate it would take 2,462 total annual hours (1 hour × 2,462 estimated affected long term care facilities) to satisfy this burden.

If you comment on these information collection and recordkeeping requirements, please mail copies directly to the following:

IV. Regulatory Impact Statement

[If you choose to comment on issues in this section, please indicate the caption “Regulatory Impact Statement” at the beginning of your comment.]

A. Overall Impact

We have examined the impact of this rule as required by Executive Order 12866 (September 1993, Regulatory Planning and Review), the Regulatory Flexibility Act (RFA) (September 19, 1980, Pub. L. 96–354), section 1102(b) of the Social Security Act, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4), and Executive Order 13132. Executive Order 12866 (as amended by Executive Order 13258, which merely reassigns responsibility of duties) directs agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). A regulatory impact analysis (RIA) must be prepared for major rules with economically significant effects ($100 million or more in any 1 year). We have examined the impact of this proposed rule, and we have determined that this rule would not meet the criteria to be considered economically significant, and it would not meet the criteria for a major rule.

This determination is based on a variety of cost factors and phase-in lengths. As a brief summary, we estimate that this proposed rule would cost $47.8 to $69.9 million, $73.5 to $107.5 million, and $107.7 to $157.6 million annually, based on phase-in periods of 10 years, 7 years, and 5 years, respectively.

The estimated cost range for installing a sprinkler system throughout an existing building for an average size unsprinklered facility (50,000 square feet) would be $205,000 to $307,500, depending on the cost per square foot. The projected installation cost of this proposed requirement would account for approximately 0.3 to 0.5 percent of an average facility’s actual revenue over a 10-year period, 0.4 to 0.7 percent over a 7-year period, and 0.6 to 0.9 percent over a 5-year period.

The basis for these estimates is fully described in section IV.B.2 of this proposed rule. In that section, we estimate that 1,947 partially sprinklered facilities would, over a 10 year phase-in period, install sprinklers throughout their buildings in accordance with this proposed rule, at a cost of $75,338 to $416,250 per facility, based on size and installation cost variables. The average yearly installation cost for all partially sprinklered facilities would be $37.2 million to $54.1 million. This determination is further based on the estimate that 515 unsprinklered facilities would install sprinklers, at a cost of $100,450 to $615,000 per facility. The average yearly installation cost for all unsprinklered facilities would be $10.5 million to $15.8 million. The average yearly installation cost estimates are based on an example of a 10-year phase-in period.

The RFA requires agencies to analyze options for regulatory relief of small businesses. For purposes of the RFA, small entities include small businesses, nonprofit organizations, and small government jurisdictions. Most hospitals and most other providers and suppliers are small entities, either by nonprofit status or by having revenues of $6 million to $29 million in any 1 year. For purposes of the RFA, most entities affected by this proposed rule are considered small businesses according to the Small Business Administration’s size standards, with total revenues of $29 million or less in any 1 year (for detail, see 65 FR 69432). Individuals and States are not included in the definition of a small entity.

According to our statistics, long term care facilities, all of which would be required to have sprinkler systems throughout their buildings, earned a total of $89.6 billion in 1999 (http://www.cms.hhs.gov/statistics/nhe/historical/17.asp). According to the National Nursing Home Survey: 1999 Summary (http://www.cdc.gov/nchs/data/sr_13/sr13_152.pdf), there were 18,000 nursing facilities in operation at that time.

(Note: In the following paragraph the terms “average facility” and “small facility” are strictly based on a revenue metric. That is, the terms describe the amount of revenue that facilities would have.)

Long term care facilities vary in a number of ways, ranging from the number of beds, the predominant source of payment for those residences. For the purposes of our general analysis, we chose to assess the financial impact of this proposed rule on an average (median) facility and a much smaller facility (50 percent below the median). An average facility had approximately $4,977,778 in revenue in 1999. A facility with revenue 50 percent below this average earned $2,488,889. For example, over a 5-year, 7-year, and 10-year period, an average facility would earn $24,888,890, $34,844,446, and $49,777,780, respectively. The small facility would earn $12,444,445, $17,422,223, and $24,888,890 over those same time periods.

The projected cost of this proposed requirement would account for 0.8 to 1.2 percent of a typical small facility’s actual revenue over the 5-year example period, 0.5 to 0.9 percent of such facility’s actual revenue over the 7-year example period, or 0.4 to 0.7 percent of such facility’s actual revenue over the 10-year example period. We are assuming that a small facility’s square footage was 50 percent less than an average facility’s square footage because there is a strong correlation between the size of a facility, as reflected by the number of resident beds it has, and the facility’s revenue level. We believe that, given these estimates, this proposed rule would not have a significant impact on a substantial number of small entities.

In addition, section 1102(b) of the Act requires us to prepare a regulatory impact analysis if a rule may have a significant impact on the operations of a substantial number of small rural hospitals. This analysis must conform to the provisions of section 603 of the RFA. For purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital that is located outside of a Metropolitan Statistical Area and has fewer than 100 beds.

We know that 8.41 percent of long term care facilities, 1,514 nationwide, are located in hospitals, but we do not know how many of those hospitals are small rural hospitals. As described in section IV.B.2 of this proposed rule, 75.89 percent of long term care facilities nationwide report that they are fully sprinklered. An additional 15.2 percent report that they are partially sprinklered, 4.14 percent report that they are not sprinklered, and 4.77 percent did not report any information about sprinklers. From this information, we estimate that, of the 1,514 long term care facilities located in hospitals, 1,204 are fully sprinklered, 241 are partially sprinklered, and 69 are not sprinklered. We assume that long term care facilities that are located in small rural hospitals are similar as well.

For a small unsprinklered facility with less than 50 resident beds, we
estimate that purchasing and installing sprinklers would cost $100,450 (at $4.10 per square foot), $134,750 (at $5.50 per square foot), or $150,675 (at $6.15 per square foot). If the small unsprinklered facility met the revenue criteria for a smaller facility as described above, then the projected cost of this proposed requirement would account for 0.8 to 1.2 percent of the facility’s revenue over the 5-year example period, 0.5 to 0.9 percent of the facility’s revenue over the 7-year example period, or 0.4 to 0.7 percent of the facility’s revenue over the 10-year example period.

For a small partially sprinklered facility with less than 50 resident beds, we estimate that purchasing and installing sprinklers would cost $75,338 (at $4.10 per square foot), $101,063 (at $5.50 per square foot), or $113,006 (at $6.15 per square foot). If the small partially sprinklered facility met the revenue criteria for a smaller facility as described above, then the projected cost of this proposed requirement would account for 0.7 to 0.9 percent of the facility’s revenue over the 5-year example period, 0.4 to 0.6 percent of the facility’s revenue over the 7-year example period, or 0.3 to 0.5 percent of the facility’s revenue over the 10-year example period.

Therefore, we believe that this proposed rule would not have a significant impact on the operations of a substantial number of small rural hospitals.

Section 202 of the Unfunded Mandates Reform Act of 1995 also requires that agencies assess anticipated costs and benefits before issuing any rule that may result in expenditure in any 1 year by State, local, or tribal governments, in the aggregate, or by the private sector, of $10 million. This proposed rule would not have an effect on State, local, or tribal governments because we do not propose to require State, local, or tribal governments to take any action. Based on our example of a 10-year phase-in period, we estimate that the private sector costs of this proposed regulation would be $47.8 million to $69.9 million in any 1 year for installation and an additional $1,019 per facility for maintenance. After the initial installation period, we estimate that the private sector costs of this proposed regulation would $2,508,778 annually for maintenance. This estimate would not approach the $110 million threshold; therefore, this section does not assess the anticipated costs and benefits as required by section 202 of the Unfunded Mandates Reform Act of 1995.

Executive Order 13132 establishes certain requirements that an agency must meet when it promulgates a proposed rule (and subsequent final rule) that imposes substantial direct requirement costs on State and local governments, preempts State law, or otherwise has Federalism implications. This proposed regulation would not have any Federalism implications.

B. Anticipated Effects

1. Benefits

Decreasing Loss of Life

We believe that installing an approved, supervised automatic sprinkler system in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, throughout a long term care facility would have a positive impact on resident safety. According to the July 2004 GAO report discussed above, installing sprinklers decreases the chances of fire-related deaths by 82 percent. In unsprinklered facilities, there are 10.8 deaths per 1,000 fires. In sprinklered facilities, there are 1.9 deaths per 1,000 fires.

The 2003 fires in Hartford and Nashville resulted in more fire related deaths (31) than there were for several previous years combined. Both of these fires occurred in unsprinklered buildings. If sprinklers had been installed in these facilities, and if they were properly maintained, we estimate that 82 percent of those fire-related deaths may have been prevented, based on an 82 percent reduction in the chances of death occurring in a sprinklered facility. We estimate that, based on this reduction, 25 (82 percent of 31 deaths = 25) lives could have been saved by sprinklers in these two fires, or 13 lives in the Hartford fire and 12 lives in the Nashville fire.

In 1997, the average age at admission for long term care facility residents was 82.6 years, and 51 percent of long term care facility residents were 85 years of age or older (The Changing Profile of Nursing Home Residents: 1985–1997, Sahyoun NR, Pratt LA, Lentzner H, Dey A, Robinson KN. Aging Trends: No. 4. National Center for Health Statistics. Hyattsville, MD; 2001). These numbers reflect the overall demographic trend in long term care facilities toward an older patient population. For the purposes of our analysis, we assume that the average age of long term care facility residents is 85. Also in 1997, the life expectancy for an individual at age 85 was 6.3 years (Older Americans 2000: Key Indicators of Well-Being. Federal Interagency Forum on Aging-Related Statistics. http://www.agingstats.gov/). This means that an 85-year-old long term care facility resident could expect to live an average of 6.3 more years.

Based on the assumption that the average age of long term care facility residents is 85 with a life expectancy at age 85 of 6.3 years, we estimate that sprinklers in these two fires would have added 157.5 life years (25 lives saved × 6.3 life years per life saved).

While the number of deaths in these two fires is not typical of the number of fire-related deaths in long term care facilities as a whole, we believe that they should still be taken into consideration when discussing the impact on the general long term care facility resident population.

In a typical year from 1994 through 1999, about 2,300 long term care facilities report structural fires (July 2004 GAO report). For the purposes of our analysis, we estimate that 3,688 long term care facilities currently do not have sprinklers installed throughout the buildings. (See section IV.B.2. of this proposed rule).

We estimate that 25 percent (575) of the 2,300 facilities that reported fires did not have sprinklers installed throughout their buildings. This estimate is based on the results of the 2004 GAO report and a nationwide survey of long term care facilities as described in section IV.B.2 of this proposed rule.

Based on the rate of 10.8 deaths per 1,000 unsprinklered facility fires, we estimate that 6 deaths occurred in 575 fires in unsprinklered facilities annually. (575 facilities = 57.5 percent of 1,000 facilities; 57.5 percent of 10.8 deaths = 6 deaths). This estimate differs slightly from the average number of deaths (5) that occurred due to long term care facility fires, as presented in the July 2004 GAO report, because this estimate predicts the number of deaths that should statistically occur, based on established percentages, rather than the average number of deaths that occurred annually in the past. This estimate is prospective, whereas the 2004 GAO figure is retrospective.

If these unsprinklered or partially sprinklered facilities install sprinklers throughout their buildings and those sprinklers are properly maintained, then we estimate that there would be 1 death (57.5 percent × 1.9 deaths per 1,000 sprinklered facility fires = 1) in those same 575 facilities. Installing sprinklers in unsprinklered buildings would, based on these estimates, save 5 lives annually.
Given the estimate described above that installing and maintaining sprinkler systems in existing long term care facilities would save 5 lives annually, we estimate that sprinklers would save 31.5 life years annually (5 lives saved × 6.3 years gained per life).

<table>
<thead>
<tr>
<th>Number of estimated annual fire-related deaths in unsprinklered long term care facilities</th>
<th>Number of estimated annual fire-related deaths if those facilities were sprinklered</th>
<th>Number of estimated annual lives saved by sprinklers</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2—Life Years

<table>
<thead>
<tr>
<th>Number of life years gained per life saved</th>
<th>Number of life years gained annually</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3</td>
<td>31.5</td>
</tr>
</tbody>
</table>

There are a wide variety of estimates regarding the statistical value of a quality-adjusted life year. That is, there are numerous studies that attempt to quantify how much individuals and society are willing to pay to gain a single, quality year of life, known as a quality-adjusted life year. These studies, using one or more of four different methodologies, have estimated that individuals and society are willing to pay between $50,000 and $450,000 for a quality-adjusted life year. Due to the fact that there is no widely accepted standard value, we have refrained from estimating the statistical value of each life year that would be gained as a result of a final rule requiring sprinklers in all long term care facilities.

Decreasing Loss of Property

As a result of installing and properly maintaining sprinklers, we anticipate that facilities that experience fires would lose less property. While the amount of property damage and loss that would be prevented by installing and maintaining sprinklers is not readily quantifiable, we believe that the amount of damage prevented would be substantial and that this prevention would benefit affected long term care facilities.

Decreasing Fire Recovery Disruption and Time

In addition to losing less property due to fire, we anticipate that long term care facilities that experience fires would be able to recover more quickly with fewer disturbances to residents. Because sprinkler heads generally activate only in the area immediately near the fire source, the area that would be damaged by a fire would likely be much smaller in a sprinklered building than it would be in a building without sprinklers, thus reducing recovery costs. In addition, by limiting the area affected by the fire, there would be fewer disturbances to residents during the recovery time. While we cannot quantify these benefits to long term care facilities and their residents, we believe that they are substantial and worth considering.

2. Costs

This proposed rule would require a long term care facility to install an approved, supervised automatic sprinkler system in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, throughout the building. This proposed rule would also allow long term care facilities to install automatic sprinkler systems within a phase-in period to be determined based on public comments. As described in section IV.B.2 of this proposed rule, we set forth the various contingencies, assumptions, and data sources that we used to develop our estimates. In addition, in section IV.B.2, we present our final estimates based on those contingencies, assumptions, and data sources.

Phase-In Period

We are soliciting public comment regarding the length of a phase-in period to allow long term care facilities to install sprinklers. The cost of installing sprinklers is substantial, and we do not expect long term care facilities to have $75,000 to $615,000, depending on the size of the area requiring sprinklers and the cost of installing sprinklers, immediately available to purchase and install sprinklers. We believe that a phase-in period would mitigate the cost of installing sprinklers by allowing facilities time to reprioritize and redistribute resources. At this time, we do not know what would be the exact length of the phase-in period.

For illustrative purposes only, we have estimated the annual costs of this proposed rule for 5-year, 7-year, and 10-year phase-in periods. While we would encourage all facilities to immediately begin the process of purchasing and installing sprinklers, we understand that some facilities would choose to wait until the next phase-in period to begin this process. Therefore, we expect that the full cost of this proposed rule would be distributed over a period of several years as facilities nationwide would likely stagger their installation schedules to meet their individual needs and circumstances.

Number and Size of Affected Facilities

We estimate that the installation provision of this proposed regulation would, over a 10-year phase-in period, impact 1,947 partially sprinklered and 515 unsprinklered long term care facilities. We based this estimate on several elements.

The July 2004 GAO report on long term care facility fire safety estimated that 20 to 30 percent of long term care facilities do not have sprinklers throughout the facility and would therefore be subject to the provisions of this regulation.

We conducted a survey of all 18,005 long term care facilities. Facilities in 46 States and the District of Columbia responded to the survey. Results from the four States that did not respond have been extrapolated based on the pattern of responses from other States. The survey found that 75.89 percent of long term care facilities are fully sprinklered. In addition, 15.2 percent of long term care facilities were partially sprinklered, and 4.14 percent did not have any sprinklers. An additional 4.77 percent of facilities is unknown. The 4.77 percent of unknown facilities has been distributed, based on the previously cited percentages, into the categories for fully, partially, and non-sprinklered.

Of the 18,005 long term care facilities, we estimate that 14,317 are fully sprinklered. In addition, we estimate that there are 2,887 partially sprinklered facilities and 782 non-sprinklered facilities (results of survey + extrapolated results for non-responding States + extrapolated unknown results). Distributing numbers based on percentages requires rounding, and can result in facilities not being fully accounted for. The above results do not account for 39 facilities. For purposes of our analysis, we assume that these 39 facilities are non-sprinklered, for a total of 821 non-sprinklered facilities.

Therefore, we estimate that 14,317 facilities would not be impacted by this proposed rule because they already have sprinklers installed throughout their...
buildings. We estimate that 3,688 facilities could potentially be impacted by this proposed rule because they do not have sprinklers installed throughout their buildings.

We estimate that, of those 3,688 facilities without sprinklers throughout, 435 partially sprinklered facilities, and 170 non-sprinklered facilities are located either in States that have their own long term care sprinkler requirements (3) or in States that would adopt the 2006 edition of the NFPA 101, Life Safety Code (LSC) (12).

The NFPA included a requirement that all existing long term care facilities install sprinklers throughout their buildings in the 2006 edition of the LSC. The NFPA already requires that sprinkler systems that are installed in all buildings be maintained according to NFPA 25.

Although Federal regulations require the 2000 edition of the LSC, 12 States have independently updated their requirements to adopt the 2003 edition of the LSC. We assume that these States would continue to adopt the most recent version of the LSC.

The 2006 edition has already been released to the public, ahead of any final CMS rule requiring sprinklers in all long term care facilities. In adopting the 2006 edition of the LSC, those States would require the long term care facilities within their jurisdictions to install and maintain sprinklers absent this proposed rule. Therefore, facilities in those States would not be impacted by this proposed rule.

In addition, we assume that 2 percent of existing long term care facilities would be replaced or fully renovated each year as part of the natural cycle of facilities upgrading their accommodations. Therefore, of the initial 2,867 partially sprinklered and 821 unsprinklered facilities, we assume that 57 partially sprinklered and 16 unsprinklered facilities would be replaced or fully renovated each year. If there were to be a 10-year phase-in period, then 570 partially sprinklered and 160 unsprinklered buildings would likely be replaced or fully renovated before the phase-in period would expire.

Of these 570 and 160 facilities, we estimate that 15 percent are in the States that have independent sprinkler requirements or would adopt the 2006 edition of NFPA 101, and would therefore require sprinklers absent Federal rulemaking. These 85 and 24 facilities (15 percent of 570 and 160 facilities) are captured in the 435 partially sprinklered and 170 unsprinklered facilities already excluded from our impact analysis, as described above. That leaves an estimated 485 existing partially sprinklered and 136 unsprinklered facilities that would be naturally replaced by new facilities with sprinklers or fully renovated within, for example, a 10-year phase-in period (570 naturally replaced or renovated facilities). The total number of estimated affected unsprinklered facilities is 515 (original 821 existing unsprinklered facilities – 170 facilities in States that would require sprinklers absent Federal rulemaking – 136 existing facilities that would be replaced naturally over a 10-year phase-in period = 515 unsprinklered facilities that would be affected by this proposed rule).

The same methodology was used to identify the number of affected unsprinklered and partially sprinklered long term care facilities over 7-year and 5-year phase-in periods. These estimates, displayed in table 3, are not the same as the estimates for a 10-year phase-in period because fewer facilities would be naturally replaced or remodeled during a 7-year or 5-year phase-in than during a 10-year phase-in. Therefore, more facilities would be affected by this proposed rule.

<table>
<thead>
<tr>
<th>Phase-in Period</th>
<th>Number of Estimated Affected Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 year</td>
<td>515</td>
</tr>
<tr>
<td>7 year</td>
<td>556</td>
</tr>
<tr>
<td>5 year</td>
<td>583</td>
</tr>
</tbody>
</table>

An average partially sprinklered facility also has 100 beds and is 50,000 square feet. Table 4 shows the size and number of affected partially sprinklered facilities over three different phase-in periods.
These buildings, however, would not require sprinklers to be installed in all areas because the building is already partially sprinklered. For purposes of this impact analysis, we assume that a partially sprinklered building is 25 percent sprinklered, leaving 75 percent of the building to be sprinklered in accordance with this proposed rule. Buildings in this category may have more or less sprinkler coverage than this assumption.

For facilities with fewer than 50 resident beds, we estimate that sprinklers would be installed for 18,375 square feet (75 percent of maximum square footage in this size category). For facilities with 50 to 99 resident beds, we estimate that sprinklers would be installed for 27,750 square feet (75 percent of average square footage in this size category). For facilities with 100 to 199 resident beds, we estimate that sprinklers would be installed for 55,875 square feet (75 percent of average square footage in this size category). For facilities with more than 199 resident beds, we estimate that sprinklers would be installed for 75,000 square feet (75 percent of minimum square footage in this size category).

Installation Cost Per Square Foot

Purchasing and installing a sprinkler system according to the requirements of NFPA 13 encompasses a wide variety of factors, including those briefly described in section II of this proposed rule. Within the requirements of NFPA 13, there are numerous variables that can impact the purchase and installation costs for a facility. Each facility has different needs that must be addressed when purchasing and installing a sprinkler system, and this cost estimate cannot address each particular need or combination of needs. Therefore, we are basing our cost estimates not on the individual requirements of NFPA 13 for an individual facility, but on a bundled purchase and installation estimate for an average facility, as described below. Individual facilities may have costs above or below those of this average facility due to facility size and facility-specific sprinkler system needs. Long term care facilities that are based in other health care facilities, such as hospitals, would be required by this proposed rule only to have sprinklers in the long term care facility section of the building. Therefore, we do not believe that facility-based long term care facilities would have different installation costs than freestanding facilities with similar resident bed and square footage numbers.

We estimate that it would cost between $4.10 and $6.15 per square foot to purchase and install a sprinkler in an existing facility, with an average cost of $5.50 per square foot. According to the Architects, Contractors, Engineers Guide to Construction Costs, 2004 Edition by Design and Construction Resources, purchasing and installing sprinklers in new long term care facilities costs $2.05 per square foot. This cost estimate incorporates all contractor costs such as labor, materials, and a 20 percent overhead fee; 35 percent taxes and insurance on labor, equipment, and tools; and 5 percent sales tax.

Although we recognize that capital and interest costs may increase the cost of purchasing and installing automatic sprinkler systems in long term care facilities, these costs are not included in our estimates. Due to the individual circumstances of each facility, unknown future interest rates, and various other factors, we are unable to accurately estimate the capital and interest costs of installing sprinkler systems. Therefore, we have chosen to exclude these costs from our estimates while acknowledging that they do exist and will play a role to some degree in the decisions of long term care facilities that would be affected by this proposed rule.

Renovation costs are typically two to three times higher than new construction costs because installing the sprinkler system must be completed in a piecemeal fashion while the building remains occupied. This increases the length of the construction time and, thus, increases its costs. In addition, renovations to add sprinkler systems often require upgrading or adding related building components such as water lines and fire pumps. The upgrades and additions require more capital investment and construction time. Increased investment and construction time also increases costs.

For purposes of this impact analysis, we assume that renovating a typical facility to add sprinklers would cost approximately 2.5 times more than purchasing and installing sprinklers in new long term care facilities. We do not have a specific source for this assumption; therefore, we have also included cost estimates for facilities that would pay $4.10 per square foot (2 times the cost of installing sprinklers in new construction) and $6.15 per square foot (3 times the cost of installing sprinklers in new construction).

Cost Estimates

The cost estimates for both unsprinklered and partially sprinklered facilities are presented in the following tables. They are based on all of the above-described estimates about the number of facilities that would be affected, the sizes of those facilities, and the installation costs per square foot. We note again that the number of facilities that would be affected by this rule changes based on the length of the phase-in period because fewer facilities would be naturally replaced or remodeled during a 7-year or 5-year phase-in than during a 10-year phase-in. Therefore, as the phase-in time is shortened, more facilities would be affected by this rule, increasing the estimated cost impact of this proposed rule.

Based on the above-described estimates and figures, we estimate that an unsprinklered facility meeting the following size specifications would have the following costs to comply with the installation requirements of this proposed regulation. (See table 5)
We estimate that a partially sprinklered facility meeting the following size specifications would have the following costs to comply with the installation requirements of this proposed regulation. (See table 6)

### TABLE 6.—TOTAL INSTALLATION COST PER PARTIALLY SPRINKLERED FACILITY

<table>
<thead>
<tr>
<th>Size Specifications</th>
<th>4.10 per square foot</th>
<th>5.50 per square foot</th>
<th>6.15 per square foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 50 beds (24,500 square feet)</td>
<td>$100,450</td>
<td>$134,750</td>
<td>$150,675</td>
</tr>
<tr>
<td>50–99 beds (37,000 square feet)</td>
<td>151,700</td>
<td>203,500</td>
<td>227,350</td>
</tr>
<tr>
<td>100–199 beds (74,500 square feet)</td>
<td>305,450</td>
<td>409,750</td>
<td>458,175</td>
</tr>
<tr>
<td>&lt;199 beds (100,000 square feet)</td>
<td>410,500</td>
<td>550,000</td>
<td>615,000</td>
</tr>
<tr>
<td>Total cost for 515 facilities (10 year phase-in)</td>
<td>105,185,500</td>
<td>141,102,500</td>
<td>157,778,250</td>
</tr>
<tr>
<td>Total cost for 556 facilities (7 year phase-in)</td>
<td>113,510,500</td>
<td>152,270,250</td>
<td>170,265,825</td>
</tr>
<tr>
<td>Total cost for 583 facilities (5 year phase-in)</td>
<td>118,941,000</td>
<td>159,555,000</td>
<td>178,411,500</td>
</tr>
</tbody>
</table>

Based on the different installation costs and phase-in lengths presented in this section, we estimate that the combined installation cost for all impacted long term care facilities (unsprinklered and partially sprinklered) would range from $478,054,349 to $787,754,341. (See table 7)

### TABLE 7.—TOTAL INSTALLATION COST FOR ALL FACILITIES

<table>
<thead>
<tr>
<th>Size Specifications</th>
<th>4.10 per square foot</th>
<th>5.50 per square foot</th>
<th>6.15 per square foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cost for 2,462 facilities (10 year phase-in)</td>
<td>$478,054,349</td>
<td>$641,292,249</td>
<td>$699,890,806</td>
</tr>
<tr>
<td>Total cost for 2,649 facilities (7 year phase-in)</td>
<td>514,339,799</td>
<td>689,962,474</td>
<td>752,787,927</td>
</tr>
<tr>
<td>Total cost for 2,773 facilities (5 year phase-in)</td>
<td>538,250,099</td>
<td>722,042,624</td>
<td>787,754,341</td>
</tr>
</tbody>
</table>

As stated earlier, we do not expect long term care facilities to have funds immediately available to purchase and install sprinklers. Therefore, we propose to allow a phase-in period of undetermined length to help mitigate the cost of installing sprinklers by allowing facilities time to reprioritize and redistribute resources.

For illustrative purposes only, we have estimated the annual costs of this proposed rule for 10, 7, and 5-year phase-in periods. While we would encourage all facilities to immediately begin the process of purchasing and installing sprinklers, we understand that some facilities would choose to wait until the very end of a phase-in period to begin this process. Therefore, we expect that the full cost of this proposed rule would be distributed over a period of several years as facilities nationwide would likely stagger their installation schedules to meet their individual needs and circumstances.

The following tables show the estimated annual installation costs for the phase-in periods based on the estimated total cost figures shown in table 7. The annual installation cost estimates have been discounted at 3 and 7 percent in order to compare the cost in today’s dollars to the cost in future dollars.

### TABLE 8.—ANNUAL COSTS OVER ALL PHASE-IN PERIODS

<table>
<thead>
<tr>
<th>Phase-In Period</th>
<th>4.10 per square foot</th>
<th>5.50 per square foot</th>
<th>6.15 per square foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 year phase-in</td>
<td>47.81</td>
<td>64.1</td>
<td>69.96</td>
</tr>
<tr>
<td>7 year phase-in</td>
<td>73.48</td>
<td>98.6</td>
<td>107.53</td>
</tr>
<tr>
<td>5 year phase-in</td>
<td>107.65</td>
<td>144.4</td>
<td>157.55</td>
</tr>
</tbody>
</table>
Maintenance

After installing an approved, supervised automatic sprinkler system in accordance with the 1999 edition of NFPA 13 throughout the building, all long term care facilities would be required to test, inspect, and maintain their sprinkler systems in accordance with the 1998 edition NFPA 25. We estimate that long term care facilities would conduct quarterly inspections of their sprinkler systems and annual trip tests. We assume that each inspection will take 4 hours to complete, at a cost of $150 per inspection. We also assume that each trip test would take 6 hours, at a cost of $250. Based on these assumptions, we estimate that long term care facilities would spend $650 annually to test and inspect their sprinkler systems. In addition, we assume that long term care facilities will spend an additional $150 annually to perform any necessary maintenance duties.

Individuals who perform these testing, inspection, and maintenance duties would have to be properly trained and, in some States and local jurisdictions, they would have to be licensed. Generally, long term care facilities would not have enough sprinkler system work needs to directly employ someone with the necessary skills, training, and licensure. Therefore, we believe that long term care facilities would likely contract with another company to meet their testing, inspection, and maintenance needs. In addition to actually conducting the necessary testing, inspection, and maintenance activities, we believe that the contract would also include a provision that the contractor prepares adequate documentation of the activities conducted. We estimate that the total cost of meeting these requirements would be $1,000 ($150 × 4 quarterly inspections × $600 + $250 annual trip test + $150 general maintenance costs = $1,000).

In addition, all long term care facilities that would be affected by this proposed regulation would be required to maintain documentation of all inspection, maintenance, and testing activities. The burden associated with these requirements is estimated to be 1 hour per long term care facility. Therefore, we estimate it would take 2,462 total annual hours (1 hour × 2,462 estimated affected long term care facilities) to meet this requirement. This documentation maintenance requirement would cost an affected facility $19 a year, based on an hourly rate of $19 for an office employee ($19 per hour × 1 hour). The total annual cost of this proposed documentation requirement would be $46,778 ($19 per facility × 2,462 facilities).

This estimated cost would be offset by the elimination of the cost of maintaining smoke alarms. Section 483.70(a)(7)(ii) requires long term care facilities that did not have sprinklers installed throughout their building to have a program for testing, maintenance, and battery replacement to ensure the reliability of smoke alarms in their facilities.

However, § 483.70(a)(7)(iii)(b) exempts long term care facilities from this smoke alarm maintenance requirement if their facilities have sprinkler systems throughout their building that are installed, tested, and maintained in accordance with NFPA 13. Therefore, long term care facilities that install and maintain sprinkler systems in accordance with this proposed regulation would be exempt from the existing requirement to maintain their smoke alarms. Due to the fact that all long term care facilities would be exempt from this smoke alarm requirement upon the phase-in date of a final regulation, we plan to add a sunset date to the smoke alarm requirement upon finalization of this sprinkler regulation. Based on the cost estimates published in “Fire Safety Requirements for Certain Health Care Facilities; Amendment” (70 FR 15229, March 25, 2005), we estimate that this exemption would save an average long term care facility that was affected by the smoke alarm requirement $2,800 annually. This results in a net savings of $1,800 annually ($2,800 savings from not maintaining smoke alarms − $1,019 cost of maintaining sprinklers = $1,781 net savings).

C. Alternatives Considered

1. Maintain Current Fire Safety Requirements

We currently require long term care facilities to comply with the fire safety requirements in the LSC. In addition, we currently require long term care facilities that do not have sprinklers installed throughout the building to have and maintain at least battery operated smoke alarms in resident rooms and public areas. We believe that these requirements are a solid foundation for ensuring that all long term care facility residents are protected from the threat of fire.

We also believe that these current measures do not go far enough to protect long term care facility residents. Both the Federal and State facilities were in substantial compliance with the LSC, yet both facilities experienced severe fires with large numbers of fatalities.

The smoke alarm requirement that we published in the Federal Register on March 25, 2005 (70 FR 15229) after these fires was a step toward improving fire safety and avoiding another devastating fire. Unfortunately, smoke alarms can only warn facility staff and residents of the fire. They cannot suppress a fire or prevent it from spreading to other areas.

Long term care facility residents often have multiple or severe health problems that complicate the facility’s ability to ensure their safety in the event of a fire. For example, frail elderly residents may rely on facility staff to assist them in transferring and otherwise moving about the facility. These types of residents are unable to independently protect themselves from the threat of fire by moving away from the danger. They are dependent on facility staff, who are also responsible for ensuring the safety of dozens of other residents. A rapidly growing fire can overwhelm both the staff and residents, leading to tragic consequences.

However, a properly designed, installed, and maintained sprinkler system effectively prevents a fire from spreading to other areas and overwhelming the staff and residents. Containing a fire reduces the threat to residents in other portions of the building and allows facility staff to focus their energy on the area that is most affected by the fire, without worry about the fire spreading to other areas and threatening other residents. Sprinkler systems have consistently served this function for many years, and they are commonly recognized as the single most effective fire safety device currently available.

Given the past success of sprinkler systems and their potential for saving lives in the future, we believe that maintaining the existing fire safety requirements without adding sprinkler requirements does not ensure the safety of long term care facility residents to the greatest extent possible.

In addition, maintaining the existing fire safety requirements would have left decisions regarding more stringent fire safety measures in the hands of State and local governments. State and local governments have, in the past, made very different decisions about fire safety requirements in long-term care facilities. For example, some States, such as Tennessee and Virginia, already require all long-term care facilities to have sprinklers throughout their buildings. In contrast, other States, such as Arkansas and Nebraska, do not have such requirements, resulting in 25 percent or
more of their long-term care facilities completely lacking sprinklers. This level of variability is not acceptable because residents of long-term care facilities should be assured the same minimum level of fire safety regardless of what State or locality they reside in. Federal regulation is the most efficient and expedient manner for achieving the goal of uniform nationwide minimum fire safety standards; therefore, we chose to pursue Federal regulation rather than depending on State and local governments.

2. Exempt Small Facilities

The Medicare Conditions of Participation are the minimum requirements that providers are required to meet in order to be Medicare and Medicaid certified. Many other standards setting organizations have requirements that go beyond what Medicare and Medicaid require. Facilities may choose to strive for these higher standards, although Medicare and Medicaid do not require them to do so.

Exempting any facility from this proposed minimum requirement would be a disservice to the residents of that facility. Residents deserve to be safe from the threat of fire, whether they reside in a large facility or a smaller one. The proposed sprinkler requirement would ensure that, regardless of the size or location of their residence, all residents are protected by the same basic minimum fire safety requirements.

We believe that a phase-in period would help to mitigate the costs of installing sprinklers for small facilities while ensuring that all residents are protected by the same minimum requirements. Therefore, we are not proposing to exempt small facilities from this requirement.

3. Require Immediate Compliance

Requiring immediate compliance with the proposed condition would, we believe, be a hardship for affected long term care facilities. Designing a sprinkler system, purchasing it, installing it, and testing it all require a significant amount of time. The typical 60-day delay in the effective date of a regulation would not be sufficient time to complete the entire sprinkler process. For this reason, we have chosen not to require immediate compliance. Instead, we believe that it is appropriate to propose a several-year phase-in period for this regulation.

We are specifically requesting public comments and suggestions regarding the length of a phase-in period in section ILB of this proposed rule.

D. Conclusion

For these reasons, we are not preparing analyses for the RFA because we have determined that this rule would not have a significant economic impact on small entities because the estimated cost of the proposed regulation would account for less than 1 percent of an affected facility’s revenue over, for example, a 7-year or 10-year period.

In accordance with the provisions of Executive Order 12866, this regulation was reviewed by the Office of Management and Budget.

List of Subjects in 42 CFR Part 483

Grant programs—health, Health facilities, Health professions, Health records, Medicaid, Medicare, Nursing homes, Nutrition, Reporting and recordkeeping requirements, Safety.

For the reasons set forth in the preamble, the Centers for Medicare and Medicaid Services proposes to amend 42 CFR chapter IV as set forth below:

PART 483—REQUIREMENTS FOR STATES AND LONG-TERM CARE FACILITIES

1. The authority citation for part 483 continues to read as follows:

Authority: Secs. 1102 and 1871 of the Social Security Act (42 U.S.C. 1302 and 1395hh).

Subpart B—Requirements for Long-Term Care Facilities

2. In § 483.70, add new paragraph (a)(7)(iv) and new paragraph (a)(8) to read as follows:

§ 483.70 Physical environment.

(a) * * *

(7) * * *

(iv) The terms of paragraph (a)(7) of this section shall remain effective through the date specified at paragraph (a)(8)(i) of this section.

(8) A long term care facility must:

(i) Install an approved, supervised automatic sprinkler system in accordance with the 1999 edition of NFPA 13, Standard for the Installation of Sprinkler Systems, as incorporated by reference, throughout the building by phase-in date to be determined. The Director of the Office of the Federal Register has approved the NFPA 13 1999 edition of the Life Safety Code, issued July 22, 1999 for incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. A copy of the Code is available for inspection at the CMS Information Resource Center, 7500 Security Boulevard, Baltimore, MD or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Copies may be obtained from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.


Mark B. McClellan,
Administrator, Centers for Medicare & Medicaid Services.

Approved: July 3, 2006.

Michael O. Leavitt,
Secretary.