[7590-01-P]

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 20, 30, 40, 50, 70 and 72

RIN: 3150-AH45

Decommissioning Planning

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations to improve decommissioning planning, and thereby reduce the likelihood that any current operating facility will become a legacy site. The amended regulations would require licensees to conduct their operations to minimize the introduction of residual radioactivity into the site, including subsurface soil and groundwater. Licensees also would be required to survey certain quantities or concentrations of residual radioactivity, including in subsurface areas, and keep records of surveys of subsurface residual radioactivity identified at the site with records important for decommissioning. The amended regulations would require licensees to report additional details in their decommissioning cost estimates, would eliminate two currently approved financial assurance mechanisms, and would modify the parent company guarantee and self-guarantee financial assurance mechanisms to authorize the NRC to require that guaranteed funds be immediately due and payable to a standby trust if the guarantor is in financial distress. Finally, the amended regulations would require decommissioning power reactor licensees to report additional information on the costs of decommissioning and spent fuel management.

DATES: Submit comments on the proposed rule by **[insert 75 days from date of publication].** Submit comments specific to the information collections aspects of this rule by **[insert 30 days from date of publication]**. Comments received after these dates will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after these dates.

ADDRESSES: You may submit comments by any one of the following methods. Please include the number RIN 3150-AH45 in the subject line of your comments. Comments on rulemakings or petitions submitted in writing or electronic form will be made available to the public in their entirety on the NRC rulemaking web site. Personal information, such as your name, address, telephone number, e-mail address, etc., will not be removed from your submission.

Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

E-mail comments to: SECY@nrc.gov. If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at 301-415-1677. Comments can also be submitted via the Federal eRulemaking Portal http://www.regulations.gov.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 am and 4:15 pm Federal workdays. (Telephone 301-415-1966)

Fax comments to: Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

Selected documents and draft guidance related to this rulemaking, including comments, may be viewed and downloaded electronically via the Federal eRulemaking Portal http://www.regulations.gov, or may be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), O1 F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The PDR reproduction contractor will copy documents for a fee.

Publicly available documents created or received at the NRC after November 1, 1999, are available electronically at the NRC's Electronic Reading Room at http://www.nrc.gov/reading-rm/adams.html. From this site, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. The ADAMS accession number is ML073470819 for publicly available documents and draft guidance related to this rulemaking. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the PDR Reference staff at 1-800-397-4209, 301-415-4737 or by e-mail to pdr@nrc.gov.

FOR FURTHER INFORMATION CONTACT: Kevin O'Sullivan, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-8112, e-mail kro2@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Background.

II. Discussion.

A. What Action is the NRC Taking?
B. Who Would This Action Affect?
C. What Steps Did NRC Take to Prepare for this Rulemaking?
D. What Alternatives Has NRC Considered?
E. What is a Legacy Site?
F. What are Financial Assurances?
G. Why Might Some Materials Licensees Not Have Funds to Decommission Their Facility?
H. Why is 10 CFR 50.82 Being Amended?
I. What Changes are Being Proposed to 10 CFR 20.1406?
J. What Surveys are Required under Proposed Changes to 10 CFR 20.1501(a)?
K. What Information Must the Licensee Collect under Proposed Changes to 10 CFR 20.1501?
L. How Would Licensees Report Required Information to the NRC?
M. What Financial Assurance Information Must Licensees Currently Report to the NRC?
N. What are the Proposed Changes to the Financial Assurance Regulations?
O. Will Some Licensees Who Currently Do Not Have Financial Assurance Need to Get Financial Assurance?
P. What is Changing with Respect to Materials Facilities' Decommissioning Funding Plan (DFP) and Decommissioning Cost Estimate (DCE)?
Q. What is Changing with Respect to License Transfer Regulations for Materials Licensees?
R. What is Changing with Respect to Permanently Shutdown Reactor Decommissioning Fund Status and Spent Fuel Management Plan Reporting?
S. When Do These Proposed Actions Become Effective?
T. Has NRC Prepared a Cost-Benefit Analysis of the Proposed Actions?
U. Has NRC Evaluated the Additional Paperwork Burden to Licensees?
V. What Should I Consider as I Prepare My Comments to NRC?

III. Discussion of Proposed Amendments by Section.
IV. Criminal Penalties.
V. Agreement State Compatibility.
VI. Plain Language.
VII. Voluntary Consensus Standards.
VIII. Environmental Assessment and Finding of No Significant Environmental Impact.
IX. Paperwork Reduction Act Statement.
X. Public Protection Notification.
XI. Regulatory Analysis.
XII. Regulatory Flexibility Certification.
XIII. Backfit Analysis.

I. Background

In 1988, NRC issued regulations in Title 10 Code of Federal Regulations (10 CFR) Parts 30, 40, 50, 51, 70 and 72 establishing new financial criteria applicable to decommissioning licensed nuclear facilities (53 FR 24018; June 27, 1988). Planning, estimating costs, acceptable funding methods, and environmental review provisions were among the requirements established in 1988, and were designed to ensure that licensee funds would be available when needed to complete safe and timely decommissioning of all licensed facilities. Financial assurance regulations are part of NRC's overall strategy to maintain public health and safety, and protection of the environment, during and after nuclear facility decommissioning. The NRC announced in 1988 that it intended to periodically assess the effectiveness of the funding methods permitted in the regulations. Since then, the NRC has issued several amendments to the financial criteria applied to decommissioning licensed nuclear facilities.

After NRC published financial assurance regulations in 1988, a small number of sites were unable to fully comply with the financial assurance requirements. In some cases, these sites had large amounts of onsite residual contamination, remediation of which would exceed available funds. The Commission directed the staff, in Staff Requirements Memoranda (SRMs) dated August 22, 1989, and January 31, 1990, to develop a strategy for resolving decommissioning issues and to develop a prioritized list of contaminated sites. In response, the Site Decommissioning Management Plan (SDMP) was developed, containing cleanup criteria based in part on residual radioactivity concentrations for sites with extensive uranium and thorium contamination.

In 1993 (58 FR 68726), licensees that passed financial test criteria were allowed to use a self-guarantee to provide financial assurance for decommissioning. In 1996 (61 FR 39299; July 29, 1996), nuclear power reactor decommissioning procedures were clarified, while

recognizing that the radioactivity resulting from contaminated materials and effluents (air and water) must be minimized and controlled. In 1998 (63 FR 29535; June 1, 1998), use of the self-guarantee method was broadened to include some commercial licensees who do not issue bonds, as well as non-profit licensees, such as colleges, universities and hospitals. Also in 1998 (63 FR 50465; September 22, 1998), NRC amended power reactor decommissioning financial assurance requirements in response to potential deregulation of the power generating industry. In 2003 (68 FR 57327; October 3, 2003), the set of materials licensees for which financial assurance is required was expanded to include all waste brokers. Additionally, large irradiators were required to prepare a site-specific decommissioning cost estimate as the basis of their financial assurance; decommissioning certification amounts were increased by 50 percent; and decommissioning cost estimates were required to be updated for certain licensees at least every 3 years.

Apart from these changes in financial assurance requirements summarized above, more comprehensive and risk informed decommissioning regulations were issued in 1997 as Subpart E of 10 CFR part 20 (62 FR 39058; July 21, 1997). This set of requirements is known as the License Termination Rule (LTR). The LTR is based on calculated doses, and it established specific radiological criteria for remediation of lands and structures to complete site decommissioning and successfully terminate the license. The LTR provides an overall approach for license termination for two different site conditions: unrestricted use and restricted conditions for use after license termination. The LTR applies to the decommissioning of facilities licensed under 10 CFR parts 30, 40, 50, 60, 61, 63, 70 and 72. In the *Federal Register* notice publishing the LTR final rule, in response to a public comment that the requirements of then-proposed 10 CFR 20.1406 should apply to all licensees, rather than only to applicants for new licenses, the Commission stated:

> "Applicants and existing licensees, including those making license renewals, are already required by 10 CFR part 20 to have radiation protection programs aimed towards reducing exposure and minimizing waste. In particular, Sec. 20.1101(a) requires development and implementation of a radiation protection plan commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the provisions of 10 CFR part 20. Section 20.1101(b) requires licensees to use, to the extent practicable, procedures and engineered controls to achieve public doses that are ALARA. In addition, lessons learned and documented in reports such as NUREG-1444 have focused attention on the need to minimize and control waste generation during operations as part of development of the required radiation protection plans. Furthermore, the financial assurance requirements issued in the January 27, 1988 (53 FR 24018), rule on planning for decommissioning require licensees to provide adequate funding for decommissioning. These funding requirements create great incentive to minimize contamination and the amount of funds set aside and expended on cleanup." (62 FR 39082; July 21, 1997).

Current 10 CFR 20.1101(a) requires each licensee to implement a radiation protection program to ensure compliance with the regulations in 10 CFR part 20. Current § 20.1101(b) requires each licensee to use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as reasonably achievable (ALARA). Licensees need to apply operating procedures and controls to evaluate potential radiological hazards and methods to minimize and control waste generation during facility operations, to achieve doses that are ALARA.

In SRM-SECY-01-0194, dated June 18, 2002, the Commission directed the staff to conduct an analysis of LTR issues. The staff conducted the analysis and presented results and recommendations to the Commission in SECY-03-0069 (http://www.nrc.gov/reading-rm/doc-collections/commission/srm/ 2003/ 2003-0069srm.pdf), (dated May 2, 2003, and known as the LTR Analysis). One of the recommendations was a set of "measures to prevent future legacy sites." A legacy site is a facility that is in decommissioning status with complex issues and an owner who cannot complete the decommissioning work for technical or financial reasons (as discussed further in Section II.E of this document). The set of measures to prevent future

legacy sites had two distinct parts: (1) The need for timely reporting during facility operations of subsurface contamination that has a potential to complicate future decommissioning efforts; and (2) The need for more detailed reporting of licensee financial assurance mechanisms to fund site decommissioning activities and protection of the committed funds in cases of financial distress. The need for timely reporting of subsurface contamination during facility operations was explained in Attachment 8 to SECY-03-0069. Attachment 8, under the heading "chronic releases," recommended revising 10 CFR 20.1406 to extend its minimization of contamination requirements to cover licensees in addition to license applicants. Recommendations for more detailed decommissioning financial assurance requirements are set forth in Attachment 7 to SECY-03-0069.

In SRM-SECY-03-0069 the Commission approved the staff's recommendations summarized above, and authorized this proposed rulemaking. As pertinent to the proposed 10 CFR 20.1406 and 10 CFR 20.1501 revisions, the Commission's SRM states as follows:

> "The Commission has approved the staff's recommendation related to changes in licensee operations as described in attachment 8. However, in addition to incorporating risk-informed approaches, the staff should ensure that they are performance-based. The staff will have to be very careful when crafting the guidance documents so that it is clear to the licensees and to the staff how much characterization information is enough. The staff should only ask for limited information. Licensees should not be required to submit the equivalent of a full scale MARSSIM [Multi-Agency Radiation Survey and Site Investigation Manual] survey every year."

During 2003 and 2004, the NRC staff evaluated the decommissioning program and proposed other improvements to protect public health and safety beyond those identified in the LTR Analysis. To integrate and track regulatory improvements resulting from the LTR Analysis and the Decommissioning Program Evaluation, the NRC adopted an Integrated Decommissioning Improvement Plan (IDIP) for activities during FY 2004 through 2007. Among other actions, the IDIP calls for publication of this proposed rule and written guidance describing changes in the regulations to prevent future legacy sites.

In 2005 and 2006, the operators of several nuclear power plants reported that inadvertent and unmonitored radioactive liquid releases, primarily tritium contained in water, had occurred. In some instances, the release of radioactive liquid was not recognized by the licensee until years after the release apparently started. The NRC Executive Director for Operations chartered a Task Force to conduct a lessons-learned review of these incidents. The Task Force final report dated September 1, 2006, concluded that the levels of tritium and other radionuclides measured thus far do not present a health hazard to the public, and presenting a list of findings and recommendations that the Task Force believed would improve plant operations and public confidence in nuclear plant operations. The findings and recommendations in the Task Force report identified the need to clarify existing licensee requirements to demonstrate that they have achieved public and occupational exposures that are ALARA, during the life cycle of the facility which includes the decommissioning phase.

II. Discussion

A. What Action is the NRC Taking?

The NRC is proposing changes to its regulations to improve decommissioning planning, and thereby reduce the likelihood that facilities under its jurisdiction will become legacy sites. To help achieve this goal, one set of complimentary amendments have been proposed that would revise 10 CFR 20.1406 to make it applicable to licensees with operating facilities as well as to license applicants, and revise 10 CFR 20.1501(a) by replacing its undefined term "radioactive material" with "residual radioactivity," a term already defined in 10 CFR part 20. This defined term includes subsurface contamination within its scope. Both 10 CFR 20.1406(c) and 20.1501(a) are being worded to include subsurface contamination within their scope by using the term "residual radioactivity." These changes serve to reinforce the intended linkage

between these provisions, and are consistent with NRC policy that licensees conduct operations to minimize the generation of waste, to facilitate later facility decommissioning. A second set of proposed changes to improve decommissioning planning addresses decommissioning financial assurance requirements.

The proposed new 10 CFR 20.1406(c) states as follows:

> (c) Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in Subpart B and radiological criteria for license termination in Subpart E of this part.

The proposed revised 10 CFR 20.1501(a) and (b) state as follows:

> (a) Each licensee shall make or cause to be made, surveys of areas, including the subsurface, that --
> (1) May be necessary for the licensee to comply with the regulations in this part; and
> (2) Are reasonable under the circumstances to evaluate --
> (i) The magnitude and extent of radiation levels; and
> (ii) Concentrations or quantities of residual radioactivity; and
> (iii) The potential radiological hazards of the radiation levels and residual radioactivity detected.
> (b) Records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning.

As indicated, use of the term "residual radioactivity" is a key component of the above proposed requirements, and this term is discussed below.

1. Residual Radioactivity.

As set forth in 10 CFR 20.1003:

> "*Residual radioactivity* means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR part 20."

Certain operational events (e.g., slow, long-term leaks), particularly those that cause subsurface soil and ground-water contamination, can significantly increase the cost of decommissioning. To adequately assure that a decommissioning fund will cover the costs of decommissioning, the owner of a facility must have a reasonably accurate estimate of the extent to which residual radioactivity is present at the facility, particularly in the subsurface soil and ground water. As reflected above, the new 10 CFR 20.1406(c) would require that licensees conduct their operations in a manner that will minimize the introduction of residual radioactivity into the site.

Section 20.1501(a) would be revised by replacing its undefined term "radioactive material" with "residual radioactivity." To some people, the phrase "residual radioactivity" may have a connotation implying radioactive material that is "left over" after operations. This is not the meaning. As reflected in its definition stated previously, this term includes everything that the term "radioactive material" implies in the current rule language as well as other radioactive material resulting from activities under the licensee's control, such as radioactive material in the subsurface. The use of the term "residual radioactivity" in § 20.1501(a) also is intended to provide a link with new § 20.1406(c). The amended § 20.1501(a) would retain previous survey requirements, but would add that such requirements include consideration of waste in the form of residual radioactivity. Together, the amended §§ 20.1501(a) and 20.1406(c) specify that compliance with 10 CFR part 20 requirements is a necessary part of effectively planning for

decommissioning. The new §§ 20.1406(c) and 20.1501(a) provisions are discussed further in Sections II.I and J of this document. These activities, undertaken during facility operations, would provide a technical basis for licensees and NRC to understand the effects of significant residual radioactivity on decommissioning costs, and to determine whether existing financial assurance provided for site-specific decommissioning is adequate. By using the term "residual radioactivity," the new §§ 20.1406(c) and 20.1501(a) cover any licensed and unlicensed radioactive material that have been introduced to the site by licensee activities.

The new paragraph 10 CFR 20.1501(b) would be revised to require licensees to keep records of surveys of subsurface residual radioactivity identified at the site with records important for decommissioning.

During operations, residual radioactivity that would be significant for decommissioning planning would be a quantity of radioactive material that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. Significant residual radioactivity in subsurface media, such as soil, is a component of waste because it must be removed and disposed of to meet unrestricted use criteria in 10 CFR 20.1402.

During decommissioning, the licensee must evaluate dose from residual radioactivity surveyed at its site using the radiological criteria in Subpart E to 10 CFR part 20. For contamination migrating offsite from previous leaks and spills into the subsurface, a licensee must comply with the applicable license conditions for its facility. Such offsite contamination, released as an effluent in quantities below annual regulatory limits, has been a factor in the decommissioning of a few NRC and Agreement State sites. However, the scope of this rulemaking does not include offsite contamination discovered during decommissioning, unless such contamination is an extension of onsite contamination (e.g., a contaminated ground water plume originating from the licensee's facility).

NRC's technical basis for the effect that significant residual radioactivity in the subsurface has on decommissioning costs is based on a 2005 NRC staff study, "General Guidance for Inspections and Enforcement to Prevent Future Legacy Sites and Indicators of Higher Risk of Subsurface Contamination" [NRC ADAMS Accession Number ML052630421]. The purpose of this study was to evaluate experience at sites that have undergone, or were undergoing decommissioning to identify the types of events that have caused subsurface contamination. Associating these events with knowledge of currently operating sites provided a means for NRC staff to evaluate the potential for future subsurface contamination at currently operating facilities. This risk-informed approach concluded that the sites with a higher likelihood of becoming legacy sites shared the following characteristics: relatively large volumes of low specific activity radioactively contaminated liquids; large volumes of long-lived radionuclides; large throughput; liquid processes; or processes that involve large quantities of solid radioactive material stored outdoors. The study identified a number of events that could increase decommissioning costs by increasing the possibility of soil or ground-water contamination, and concluded that these events should cause the licensee to reevaluate its decommissioning cost estimate. Additional discussion on this topic is in Sections II.G and II.H of this document.

NRC considers proposed changes to 10 CFR 20.1406 and 20.1501 to be consistent with existing NRC policy for operating facilities. Under 10 CFR 20.1101(b), licensees must use procedures and engineering controls to achieve occupational doses and doses to members of the public that are ALARA, during operations and during decommissioning. To accomplish this, licensees must be able to demonstrate their knowledge of residual radioactivity in the subsurface, including soil and ground-water contamination, particularly if the subsurface contamination is a significant amount that would require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. This is an extension of the requirements promulgated, with widespread agreement, in the 1997 LTR that were applicable only to license

applicants. This action is needed because subsurface residual radioactivity at current operating facilities may be a potential radiological hazard, and a risk to fully fund decommissioning while the facility is in an operating mode. The linkage between new 10 CFR 20.1406(c) and amended 10 CFR 20.1501(a) better institutes existing NRC policy with respect to subsurface contamination during facility operations, to achieve doses that are ALARA, and identifies to licensees that survey requirements may be a necessary part of effectively planning for decommissioning as well as to comply with dose limits.

2. Financial Assurance.

The proposed rule (amending §§ 30.35, 40.36, 70.25 and 72.30, and Criterion 9 of appendix A to part 40) would codify certain aspects of existing regulatory guidance to improve the quality of Decommissioning Funding Plans (DFP), and would apply NRC experience to increase the likelihood that adequate funds will be available when needed to complete the decommissioning process. The proposed rule amendments would allow materials licensees to base their financial assurance for decommissioning on a "certification amount" only if the licensee's site surveys do not indicate the presence of residual radioactivity in amounts that would prevent the site from meeting the unrestricted use criteria in § 20.1402. The proposed rule would address the potential vulnerability of the parent company guarantee and the self-guarantee as the financial mechanism for decommissioning funding assurance during financial distress of the guarantor. Each of the licensees who use the guarantee mechanism would be required to establish a standby trust fund to receive the guaranteed financial assurance amount should that amount become immediately due and payable.

Licensees with reactors in a decommissioning status would have additional reporting requirements for decommissioning fund status, spent fuel management costs, and estimated decommissioning costs. These proposed reporting requirements, in part, modify the existing Post Shutdown Decommissioning Activities Report requirements set forth in 10 CFR

50.82(a)(4)(i). Additional reporting requirements would require each power reactor licensee undergoing decommissioning to thereafter submit an annual financial assurance status report, as set forth in new paragraphs (a)(8)(v)-(a)(8)(vii) of 10 CFR 50.82(a)(8).

Under the proposed rule, all licensees decommissioning their facilities pursuant to 10 CFR 20.1403 restricted release criteria would be required to use a trust fund to meet the financial assurance requirements. A trust fund would be the only financial assurance mechanism allowed for the long term maintenance and surveillance of restricted release sites unless a government organization either provides a guarantee of funds or assumes custody and ownership of the site. This topic is discussed further in Sections II.M, N and O of this document.

B. Who Would This Action Affect?

Based on the Regulatory Analysis for this proposed rule, NRC estimates that a small number of materials licensees (a total of about 5 NRC and Agreement State licensees) would need to perform additional site surveys due to the presence of significant residual radioactivity. The licensees who will need to perform additional surveys were modeled in the Regulatory Analysis as rare metal extraction facilities with uranium as a soil contaminant. Although the number of licensees affected by the proposed rule is small, the cost to States or the Federal Government to enforce and then fully decommission a single legacy site is much higher than the cost to prevent the occurrence of a legacy site through amended regulations.

For NRC licensees who have subsurface residual radioactivity with no ground water implications, a minimal, routine monitoring plan may remain in effect through license termination. The routine monitoring plan is described in draft regulatory guidance released concurrently with this proposed rule. Application of a minimal, routine monitoring plan at sites with no ground water implications is meant to improve licensee decommissioning planning and the basis used for decommissioning cost estimates.

The large majority of NRC and Agreement State licensees are not expected to have residual radioactivity because they possess small amounts of short-lived byproduct material or byproduct material that is encased in a capsule designed to prevent leakage or escape of the byproduct material (i.e., a sealed source). This set of licensees is expected to include the non-fuel-cycle nuclear facilities, which either have no significant residual radioactive contamination to be cleaned up, or, if there is contamination, it is localized or will be quickly reduced to low levels by radioactive decay. Licensees who do not have residual radioactivity and do not have an obligation to set aside funds for decommissioning financial assurance would not be affected by this proposed rule. Draft regulatory guidance released concurrently with this proposed rule describes an acceptable method for these licensees to confirm the absence of subsurface residual radioactivity at their facilities.

Approximately 300 NRC materials licensees and over 1,000 Agreement State licensees have an obligation to set aside funds for decommissioning financial assurance. Of these, approximately 50 percent use a certified amount, specified in regulations, with the remaining 50 percent using a site-specific DFP or License Termination Plan to meet the decommissioning financial assurance requirements. If there is significant residual radioactivity at the site, the changes in §§ 30.35, 40.36, 70.25, and 72.30 would require a licensee to switch out of its certified funding amount, and replace the certified amount with a DFP. In preparing this proposed rule, NRC staff was not aware of any licensees using certified amounts for decommissioning that would need to switch to a DFP because of significant residual radioactivity.

Licensees using a site-specific DFP or License Termination Plan to meet decommissioning financial assurance requirements would have additional reporting requirements based on changes in §§ 30.35, 40.36, 50.82, 70.25, and 72.30. The materials licensees under 10 CFR part 30, 40, 70 and 72 would need to provide more details to support

their decommissioning cost estimate, such as the assumed cost of an independent contractor to perform all decommissioning activities. The power reactor licensees under 10 CFR part 50 would need to provide more details to support their decommissioning schedule, cost estimates for managing irradiated fuel, and annual financial assurance status report.

The proposed changes to 10 CFR 50.82(a) affect the 12 power reactor licensees undergoing decommissioning. Such licensees would need to provide more details regarding their decommissioning cost estimates, including those for managing irradiated fuel. More specifically, licensees who have submitted a certification of permanent cessation of operations under 10 CFR 50.82(a) would thereafter be subject to annual financial assurance reporting requirements similar to those imposed on operating reactors under existing 10 CFR 50.75(f). The annual reports would identify yearly decommissioning expenditures, the remaining balance of decommissioning funds, and would contain a cost estimate to complete decommissioning. Similar to the one-time reports required by 10 CFR 50.54(bb), the proposed annual reports to be required under 10 CFR 50.82(a)(8) would identify the amount of funds accumulated to manage irradiated fuel, and the projected cost of managing the irradiated fuel until title and possession is transferred to the Secretary of Energy.

Approximately 20 licensees who use an escrow account as a prepayment financial mechanism would be affected by proposed changes in §§ 30.35, 40.36, 70.25, and 72.30 (which would eliminate the escrow account as a prepayment financial assurance method). No licensees are using a line of credit as a financial mechanism; both the escrow account and the line of credit are proposed for elimination as acceptable financial assurance instruments.

Approximately 45 NRC licensees use a parent company guarantee or self-guarantee as a financial assurance mechanism. These licensees may be affected by proposed changes in 10 CFR part 30, appendices A, C, D, and E, which would require establishment of a standby trust fund before the guarantee becomes effective. The standby trust fund would be set up for

receipt of funds in the case of financial distress by the guarantor. In the Regulatory Analysis and Paperwork Reduction Act burden estimate, NRC has assumed that a total of 25 of these licensees would need to establish a trust fund to comply with the amended regulations with the other 20 already having an established trust fund.

The Regulatory Analysis for this proposed rule, referenced in Section X of this document, has detailed cost-benefit estimates regarding the licensees who would be affected by the amended regulations.

C. What Steps Did NRC Take to Prepare for this Rulemaking?

The NRC took several initiatives to enhance stakeholder involvement and to improve efficiency during the rulemaking process. On May 28, 2004, the NRC staff issued Regulatory Information Summary (RIS) 2004-08, "Results of the License Termination Rule Analysis." This RIS was the first follow-up action taken in response to SRM-SECY-03-0069. The purpose of the RIS was to inform licensees and stakeholders of NRC's analysis of the issues associated with implementing the LTR, the Commission's direction to resolve these issues, the schedule for future actions, and opportunities for stakeholder comment. The RIS noted that stakeholder involvement would be an important part of developing the planned rulemaking and guidance.

In April 2005, the NRC conducted a two-day decommissioning workshop examining a number of LTR topics, including potential changes in facility operating requirements and changes to financial assurance to prevent legacy sites. Stakeholders addressed the issues and potential resolutions included in this proposed rule. Since then, NRC has maintained a series of web pages with information (http://www.nrc.gov/about-nrc/regulatory/decommissioning.html) including draft guidance documents, Commission papers, and a variety of decommissioning program documents. NRC presented papers on the scope of this proposed rulemaking at American Nuclear Society conferences in 2004, 2005 and 2006 and other stakeholder forums.

In June 2006, the NRC formed a proposed rule Working Group of NRC staff and one Agreement State representative from the Organization of Agreement States (OAS). The NRC has held discussions with State and Federal agencies on their experience with trust funds for long-term financial assurance, including a discussion with the U.S. Environmental Protection Agency (EPA) on October 6, 2006.

In January 2007, the NRC held a public roundtable meeting that was attended by about 70 stakeholders. The meeting was held to solicit input from stakeholders and interested members of the public regarding the issues of licensee control and identification of subsurface residual radioactivity, and proposed changes to decommissioning financial assurance requirements. The Summary Notes and transcript of this public meeting are posted on: http://www.nrc.gov/about-nrc/regulatory/decommissioning/public-involve.html.

D. What Alternatives Has NRC Considered?

The rulemaking Working Group considered different alternatives for the proposed rule and agreed on the following for analysis in the Environmental Assessment (see Section VIII of this preamble) and the Regulatory Analysis (see Section XI of this preamble):

Alternative 1: No Action.

This alternative provides a baseline to assess the other two alternatives. It assumes that if no changes are made to the regulations, there will be additional legacy sites from currently operating facilities licensed by NRC and Agreement States.

Alternative 2: Monitoring with proposed changes to financial assurance.

This alternative would implement the proposed changes in 10 CFR 20.1406(c) and 20.1501, and the proposed changes to decommissioning planning and financial assurance requirements.

Alternative 3: Monitoring with proposed changes to financial assurance, and collateral.

This alternative would implement the proposed changes in Alternative 2, and one additional requirement for a security interest in collateral to support the decommissioning assurance pledged in the parent company guarantee and self-guarantee financial assurance mechanisms.

NRC considered two other alternatives, beyond the three noted previously, but did not analyze them in as much detail. One alternative was to require that materials licensees obtain accidental property damage insurance to cover the reasonable costs of decontaminating its facility and site and disposing of contaminated materials in the event of a large, sudden and accidental onsite release of radioactive material. This was prompted, in part, by the objective to apply consistent financial assurance standards to reactors and materials facilities. The NRC requires reactor licensees, under 10 CFR 50.54(w), to obtain insurance to pay for cleaning up an accidental release of radioactive material that causes a present danger of release offsite that would pose a threat to public health and safety. NRC staff evaluated whether it would be appropriate to require onsite property damage insurance for materials facilities to pay costs associated with cleaning up a sudden and accidental event that could, if the operators needed to shut down the facility, overwhelm the decommissioning fund. This issue has been addressed before. On June 7, 1985 (50 FR 23960), the NRC published an advanced notice of proposed rulemaking requesting comments on requiring financial assurance for the cleanup of accidental or unexpected contamination, both onsite or offsite. After several technical studies were conducted, the NRC concluded in 1995 that no such rulemaking was necessary. The NRC has revisited this issue and has found that there have been no significant changes affecting the 1995 conclusion. Accidents at materials facilities that require expensive cleanup continue to be rare, with annual costs of cleanup small. The reportable radioactive material spills and releases from materials facilities over the 15-year period since 1991, as documented in the Nuclear

Materials Events Database, have been about 2 events per year. Those events were primarily one-time small spills caused by mechanical failure of a valve, pump or pipe or in a few cases from human error. In the early 1990s there were several reportable events of contaminated drain lines or leakage from a storage pond, but these types of low-level chronic contaminating events have not been reported at facilities since then.

NRC determined that materials licensees are not able to obtain, at reasonable cost, environmental impairment liability insurance, including nuclear contamination events from both sudden and gradual accidental releases. American Nuclear Insurers (ANI), an agent for multiple insurance companies, provides non-reactor nuclear liability policies that provide coverage for third party claims made to cover off-site liability damages. The policies do not cover onsite damages nor do the policies cover the cost of environmental cleanup that would exceed the actual damages to the third party. NRC had determined that non-reactor property insurance is available, but this insurance would exclude "gradual contamination" and cover only damages caused by a "sudden and accidental" event. Because the events occur only rarely and on a small scale, NRC has decided not to propose amendments to require materials licensees to obtain environmental cleanup insurance.

The occurrence of "gradual contamination," such as leakage outside the licensee's buildings, is intended to be addressed by the proposed changes to §§ 20.1406(c) and 20.1501. Funding to remediate the leakage would be addressed by changes in the requirements for reporting decommissioning fund status and decommissioning cost estimates.

Another alternative considered by NRC is the use of licensee incentives to facilitate decommissioning planning and reduce the likelihood of future legacy sites. In Section II.V of this document, NRC seeks public comments on this topic. The Advisory Committee on Nuclear Waste (ACNW) recommended, in a December 27, 2006, letter to Chairman Klein, that NRC staff should consider offering financial incentives to certain licensees to encourage their use of

integrated monitoring and modeling approaches to demonstrate compliance with regulations and to apply site characterization data in a conceptual site model maintained during the facility lifetime. The regulations in 10 CFR 171.11(b) allow the Commission to grant an exemption in a licensee fee that it determines is authorized by law or otherwise in the public interest. NRC staff is not aware of any time the Commission has used a 10 CFR part 171 annual fee exemption for this purpose. NRC staff was aware of 10 CFR part 170 fee exemptions, or fee waivers, for plants to "pilot" a new license amendment process. In practice, fee waivers are given very sparingly and only with convincing evidence that there is a public benefit to the waiver. The cost of a fee waiver would have to be paid through annual fees from other NRC licensees.

E. What is a Legacy Site?

A legacy site is a facility that is in decommissioning status with complex issues and an owner who cannot complete the decommissioning work for technical or financial reasons. These sites have been materials facilities, not reactor facilities.

The purpose of this proposed rulemaking is to improve decommissioning planning and thereby reduce the likelihood that a site will become a legacy site, thus avoiding unnecessary expense and promoting more timely return of licensed sites to other productive uses.

NRC terminates several hundred materials licenses each year. Most of these are routine actions, and the sites require little, if any, remediation to meet NRC's unrestricted use criteria. There are other sites where more complex decommissioning actions are needed. These complex decommissioning sites are described, along with the objectives of NRC decommissioning activities, in the "Status of Decommissioning Program 2006 Annual Report" available at: http://www.nrc.gov/about-nrc/regulatory/decommissioning/program-docs.html. This report identifies and describes the status of 32 complex materials sites undergoing decommissioning. Of the total 32 complex sites, NRC considers 8 of these to be legacy sites as

of December 31, 2006. Residual radioactivity at the complex decommissioning sites is primarily from the following radionuclides: U-235, U-238, Th-232, Ra-226, Cs-137, Am-241, Sr-90, and H-3. Public or occupational exposure to these radionuclides may be a radiological hazard.

F. What are Financial Assurances?

Financial assurances are financial arrangements provided by a licensee, whereby funds for decommissioning will be available when needed. Each NRC licensee has a regulatory obligation to properly decommission its facility. However, only licensees whose decommissioning cost is likely to exceed a threshold amount must provide financial assurance. All nuclear power reactors and about 7 percent of NRC materials licensees must provide decommissioning financial assurance. This financial assurance may be funds set aside by the licensee or a guarantee that funds will be available when needed. The guarantee may be provided by a qualified third party or, upon passage of a financial test by the licensee. The third party may be the parent company of the licensee, which is the case for about 10 percent of the NRC materials licensees who are obligated to have decommissioning financial assurance.

Nuclear power reactors have financial assurance obligations that are different from materials licensees. The minimum amount of financial assurance for reactors is defined in 10 CFR 50.75, and the acceptable financial assurance mechanisms are defined in § 50.75(e)(1). An external sinking fund is used to provide financial assurance for about 90 percent of the reactors. The remaining 10 percent of reactors have assurance through prepaid funds and/or guarantees. No changes in these requirements are planned for power reactor licensees.

As of December 31, 2006, there are about 300 NRC materials licensees that have a regulatory obligation to provide approved financial assurance mechanisms. An acceptable

financial assurance mechanism for unrestricted use decommissioning is any of the following four types of financial instruments:

- A prepayment of the applicable decommissioning costs;
- A guarantee to pay the decommissioning costs issued by a qualified third party or the licensee;
- A statement of intent from a Federal, state or local government licensee; or
- An external sinking fund.

The prepayment method is full payment in advance of decommissioning using an account segregated from licensee assets and outside the licensee's administrative control. About 11 percent of current financial assurance mechanisms for materials licensees are prepayment methods, with most of these being escrow accounts. Currently accepted prepayment mechanisms include escrow accounts (8 percent), trust funds (2 percent), certificates of deposit (1 percent), government funds (0 percent), and deposits of government securities (0 percent). The proposed rule would eliminate all prepayment mechanisms except the trust fund, for reasons discussed under Section II.N.2 of this document.

The guarantee method can be used by licensees that demonstrate adequate financial strength through their annual completion of financial tests contained in appendices A, C, D, and E of 10 CFR part 30. About 51 percent of current financial assurance mechanisms for materials licensees are guarantee methods. Currently accepted guarantee mechanisms include letters of credit (28 percent), parent company guarantees (8 percent), licensee self-guarantees (7 percent), surety bonds (8 percent), lines of credit (0 percent), and insurance policies (0 percent). The proposed rule would eliminate the line of credit as an acceptable mechanism, for reasons discussed under Section II.N.10 of this document.

The statement of intent is a commitment from a Federal, state or local government licensee that it will request and obtain decommissioning funds from its funding body, when necessary for decommissioning an NRC licensed site. It is available for use only by governmental entities. Approximately 38 percent of the NRC materials licensees with financial assurance use the statement of intent as a means to provide financial assurance.

The external sinking fund allows the licensee to gradually prepay the decommissioning cost estimate, with the amount that is not prepaid covered by a surety mechanism or insurance, for materials licensees, or by surety, insurance, or a guarantee method for power reactor licensees. In a final rulemaking for power reactor financial assurance, the NRC allowed use of a parent company guarantee or self-guarantee with an external sinking fund (63 FR 50465; September 22, 1998). Analogous reasoning applies to materials licensees. The proposed rule amendments would make conforming changes in the financial assurance requirements for materials licensees (10 CFR 30.35, 40.36, 70.25, and 72.30) to provide greater consistency with the 10 CFR part 50 regulations. None of the NRC materials licensees that have an obligation to provide decommissioning financial assurance currently use an external sinking fund.

The previous discussion was for financial assurance to decommission a site for unrestricted use under 10 CFR 20.1402. If a licensee can demonstrate its ability to meet the provisions of 10 CFR 20.1403 for restricted use, financial assurance for long-term surveillance and control may be provided by a trust fund or by a government entity assuming ownership and custody of the site.

G. Why Might Some Materials Licensees Not Have Funds to Decommission Their Facility?

In SECY-03-0069, NRC evaluated licensee decommissioning experience and identified the following five reasons why some licensees may not have enough funds to complete their decommissioning activities.

1. Licensees at complex sites may underestimate decommissioning costs, if the assumption that the site will qualify for a restricted release proves incorrect. The cost for a restricted release is usually significantly lower than unrestricted release given the high offsite disposal costs of licensed material when compared to the cost of onsite controls. If it turns out that the licensee cannot meet the 10 CFR 20.1403 criteria for restricted conditions, the licensee may then not be able to meet its decommissioning financial obligations. To address this problem, the NRC proposes to amend 10 CFR 30.35, 40.36, 70.25 and 72.30 to require licensees to obtain NRC approval of their DFP based on a decommissioning cost estimate for unrestricted release, unless the ability to meet the restricted release criteria can be adequately shown.

2. Certain operational events, particularly those that cause soil or ground-water contamination, can increase decommissioning costs if not addressed during the life of the facility. If the licensee does not identify these events, assess the problem in a timely manner, and update its decommissioning cost estimate based on new conditions, the licensee may find it difficult to later meet its decommissioning obligations. To address this problem, the NRC proposes to amend 10 CFR 20.1406 as discussed in Section II.A above. Licensees also would be required, in proposed amendments to 10 CFR 30.35, 40.36, 70.25 and 72.30, to factor in residual radioactivity information in arriving at decommissioning cost estimates.

3. Certain financial assurance methods may not be effective in bankruptcy situations, given that funds held in them may be accessible to creditors. For example, title to property held in escrow remains with the licensee, making the property potentially vulnerable to claims by creditors. Another example is the parent and self-guarantees. The guarantees promise performance rather than payment. In the past, two companies used corporate reorganization to isolate the decommissioning obligations with the subsidiary company, but with insufficient funds to perform the work. In one case, the parent company reorganized without NRC approval and

transferred to the subsidiary few assets and low levels of operating profits, so that the subsidiary was able to fund only a small portion of its decommissioning costs. In the second case, the parent company purchased the licensee before the time the financial assurance regulations were in effect. The licensee was permanently shut down after the purchase and was unable to provide full financial assurance. To address this problem, the NRC proposes to amend 10 CFR 30.35, 40.36, 70.25, 72.30, and 10 CFR part 30 appendices A, C, D, and E by eliminating the use of an escrow account as a financial assurance option, and requiring a guarantor, as a condition of using the parent company guarantee and self-guarantee financial assurance options, to establish a standby trust fund and to submit to a Commission order, if the guarantor is in financial distress, to immediately pay the guaranteed funds into the standby trust.

4. The funds set aside by licensees to carry out decommissioning may decline in value over time. To address this problem, the NRC proposes to amend 10 CFR 30.35(h), 40.36(f), 70.25(h), and 72.30(g) to require that licensees monitor the status of its decommissioning funds and, if necessary, add funds if the balance falls below the estimated cost of decommissioning.

5. The initial funding of a trust fund to cover the recurring costs of long-term surveillance and control for license termination under restricted release criteria may be inadequate if it is based on a high assumed rate of return for the trust fund. To address this problem, the NRC proposes to amend 10 CFR 20.1403 to require that licensees assume only a 1 percent real rate of return in establishing the initial funding amount.

H. Why is 10 CFR 50.82 Being Amended?

Several power reactor licensees have successfully decommissioned their reactor sites consistent with 10 CFR part 20 requirements. In some cases, reactor decommissioning costs have exceeded the initial decommissioning cost estimate. For example, the Connecticut

Yankee Nuclear Plant experienced higher decommissioning costs than planned, due in part to a larger volume of contaminated soil than was identified in the initial site characterization.

In the past, NRC has not required licensees to submit details of decommissioning costs on grounds that the typical reactor licensee was part of a public utility with access to substantial assets and revenues and that the minimum required amount for decommissioning financial assurance was adequate. A licensee's status as a regulated public utility provided access to cost of service rate recovery to help provide additional funds. A public utility had access to sales revenues to fund its obligations, even if rate recovery was limited.

Deregulation of the electric industry now permits a reactor licensee to operate as a merchant plant not subject to rate regulation or rate recovery of costs of service. When it ceases operation, it may have no sales revenues. The licensee may be organized as a separate company or a subsidiary of a holding company to isolate the risks and rewards of selling electricity on the open market. Without access to rate relief, no sales revenues, and with the licensee's owner protected by limited liability, shortfalls in decommissioning funding may jeopardize timely completion of decommissioning. Additional oversight is necessary to assure that the licensee anticipates potential shortfalls and takes steps to control costs to stay within its budget or obtain additional funds.

I. What Changes are Being Proposed to 10 CFR 20.1406?

New 10 CFR 20.1406(c) states as follows:

> (c) Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in Subpart B and radiological criteria for license termination in Subpart E of this part.

The term "to the extent practical" is intended to limit the scope of this provision to actions that are already manifested in practice or action. The same phrase is used in existing 10 CFR

20.1101(b), which requires that licensees keep occupational and public radiological doses to ALARA levels. Draft regulatory guidance released with this proposed rule specifies that the intent of the proposed rule is to address amounts of residual radioactivity at a site that are significant to achieve effective decommissioning planning. For operating facilities, these events result in residual radioactivity in a quantity that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402.

The current 10 CFR 20.1101 requirements are related to those in proposed 10 CFR 20.1406(c). Section 20.1101(a) requires each licensee to implement a radiation protection program to ensure compliance with the regulations in 10 CFR part 20. The current 10 CFR 20.1101(b) requires each licensee to use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are ALARA. To achieve doses that are ALARA during facility operations and decommissioning, the § 20.1101(b) operating procedures and controls must apply to potential radiological hazards and to methods used by the licensee to minimize and control waste generation.

In furtherance of these existing requirements, the new 10 CFR 20.1406(c) includes the term "residual radioactivity," as discussed previously in Section II.A. This new section would apply to current licensee operations, in contrast to the § 20.1406(a) and (b) requirements which are imposed on license applicants. Residual radioactivity excludes background radiation. All licensees with operating facilities must have performed an assessment of background radiation prior to operating their facility, to be compliant with the requirements in 10 CFR 20.1301(a)(1).

The proposed rule's use of the term "subsurface" designates the area below the surface by at least 15 centimeters, as defined in NUREG-1575, "Multi-Agency Radiation Survey and Site Investigation Manual." Under current regulations, residual radioactivity that enters the ground at a site may go undetected because there are generally no NRC requirements to

monitor the ground water onsite for contamination. Based on past NRC experience, significant concentrations or quantities of undetected and unmonitored contamination, caused primarily by subsurface migration or ground water, has been a major contributor to a site becoming a legacy site and a potential radiological hazard.

Several hundred NRC materials licensees possess radioactive material and have liquid processes that could cause subsurface contamination. These licensees generally are compliant with regulations that limit effluent release to the environment over a specified time. Some of these licensees may not have documented onsite residual radioactivity, such as spills, leaks and onsite burials that may be costly to remediate during decommissioning and should be considered in arriving at an accurate decommissioning cost estimate. There have been instances of previously unidentified soil and ground-water contamination at uranium recovery and rare earth sites undergoing decommissioning in several states, notably Colorado and Pennsylvania. Two contributing factors to the accumulation of unidentified subsurface contamination is reluctance among some licensees to spend funds during operations to perform surveys and document spills and leaks that may affect site characterization, and to implement procedures for waste minimization.

The vast majority of NRC materials licensees do not have processes that would cause subsurface contamination. NRC's expectation is that these licensees, including those that release and monitor effluents of short-lived radionuclides to municipal sewer systems, will not be impacted by 10 CFR 20.1406(c). The accumulation of radionuclides at municipal waste treatment facilities was the subject of an Interagency Steering Committee on Radiation Standards (ISCORS) study (NUREG-1775, November 2003, ADAMS accession number ML033140171), which concluded that these facilities do not have significant concentrations of long-lived radionuclides. Other classes of licensees that are, in general, not expected to introduce significant residual radioactivity into the subsurface include broad scope academic,

broad scope medical, and small research and test reactors (less than 1 MWt). The draft regulatory guidance released concurrently with this proposed rule describes an acceptable method for these licensees to confirm the absence of subsurface contamination at their facility.

Power reactor licensees have exhibited a high level of ALARA discipline with respect to effluent release and known spills and leaks. Current NRC regulations in §§ 20.1301, 20.1302 and 50.36a ensure that power reactor licensees maintain adequate monitoring and surveys of radioactive effluent discharges, with annual reporting requirements outlined in § 50.36a(2) that are made available to the public on the NRC web site at http://www.reirs.com/effluent/. Several nuclear power plants recently reported abnormal releases of liquid tritium, which resulted in ground-water contamination. To address this issue, the Nuclear Energy Institute (NEI) developed voluntary guidance for licensees in the Industry Ground Water Protection Initiative (GPI). The voluntary GPI, planned for implementation by all licensed power reactors as of September 2008, is a site-specific ground water protection program to manage situations involving inadvertent releases of licensed material to ground water and to provide informal communication to appropriate State/Local officials, with follow-up notification to the NRC as appropriate. On May 5, 2006, the NRC staff issued a revised baseline inspection module (Procedure 71122.01) used to inspect leaks and spills at power reactor sites.

J. What Surveys are Required Under Proposed Changes to 10 CFR 20.1501(a)?

Existing § 20.1501(a) requires licensees to perform surveys necessary to comply with part 20 requirements, including surveys reasonable under the circumstances to evaluate potential radiological hazards. Slow and long-lasting leaks of radioactive material into the onsite subsurface may eventually produce radiological hazards and pose a risk for creation of a legacy site if contaminant characteristics are not identified when the facility is operating. The staff views radiological hazards as including those resulting from subsurface contaminating events,

when these events produce subsurface residual radioactivity that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. An effective approach to understand the extent of subsurface residual radioactivity is through the use of radiological surveys.

Appropriate surveys are essential for determining the adequacy of financial assurance for materials licensees, and need to be done periodically on a limited basis during operations when the DFP and financial assurance can be adjusted while the licensee is still generating revenue. This is far superior to the current practice at some facilities to delay even limited survey work of the site until after the facility has been shut down.

Facilities that process large quantities of licensed material, especially in liquid form, have the potential for causing significant environmental contamination. Leaks from these facilities can lead to large amounts of radioactive contamination entering the subsurface environment over an extended period of time. The estimated doses from this contamination are below the limits in 10 CFR part 20 that would initiate immediate regulatory action. Another factor the staff has considered in this rulemaking is the high cost to dispose of radioactive materials offsite. These costs are a concern even when the material contains relatively low concentrations of radioactivity. A continued trend of high disposal costs could increase the number of environmental contamination incidents at operating facilities, resulting in substantially higher decommissioning costs. A third factor that could cause future legacy sites is the delayed identification of contamination on the site. Over a long time, contamination that migrates in subsurface soil or ground water does not cause immediate exposure to either workers or the public that approach the limits specified in 10 CFR part 20. It is only after operations have ceased when the possible results of unlimited access to the site, and associated exposure pathways (i.e., ingestion and inhalation) are being evaluated, that the extent of contamination has become apparent.

As discussed previously in Section II.A, in accordance with proposed changes to 10 CFR 20.1501(a), licensees would be required to perform contamination surveys to comply with current 10 CFR part 20 requirements, and the new § 20.1406(c). The magnitude and extent of radiation levels are typically defined in units of radioactivity measurement, such as in micro-rem per hour (μrem/hr). The concentrations or quantities of residual radioactivity are typically defined in units of radioactivity associated with a specific radionuclide, for example picocurie per liter of tritium (pCi/L of H-3).

The amended § 20.1501(a) would retain previous survey requirements and would specify that such requirements include consideration of subsurface residual radioactivity. Survey requirements may include ground-water monitoring if reasonable under the site specific conditions. Soil sampling also may be warranted based on site specific conditions, for example if there is no ground-water monitoring at the site or if known subsurface contamination has not migrated to the ground water wells. Draft regulatory guidance released concurrently with the proposed rule describes a variety of acceptable methods to evaluate subsurface characteristics. The NRC recognizes that ground-water monitoring may be a surrogate for subsurface monitoring at some sites, that soil sampling may be appropriate at other sites, and that there are sites with no subsurface residual radioactivity where the existing monitoring method is appropriate. Also, the NRC recognizes that an area within the footprint of a building, during licensed operations, may not be a suitable area for subsurface residual radioactivity surveys if the process of sampling would have an adverse impact on facility operations. The decision to perform subsurface residual radioactivity sampling in a particular area should be balanced against the potential to jeopardize the safe operation of the facility. The purpose of amended 10 CFR 20.1501(a) and 20.1406(c) is to specify that compliance with 10 CFR part 20 survey and recordkeeping requirements is necessary to demonstrate compliance with existing

regulations and to plan effectively for decommissioning, including effects from subsurface contamination.

Other proposed amendments (revised 10 CFR 30.35(e)(2), 40.36(d)(2), 70.25(e)(2), and 72.30(c)) would require licensees who have a DFP or a License Termination Plan to factor in the results of surveys, performed under § 20.1501(a), in estimating decommissioning costs. This new requirement would apply only to licensees who are required to have a DFP, and would assure that these licensees properly consider the extent of subsurface residual radioactivity in their decommissioning cost estimates, thus improving decommissioning planning and helping to reduce the likelihood of future legacy sites.

For the materials licensees with a certified amount as decommissioning financial assurance, NRC assumes their current monitoring methods are adequate. If these licensees detect onsite contamination that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402, the licensees would be required to submit a decommissioning cost estimate.

For the materials licensees who are not required to have financial assurance for decommissioning based on a license possession limit that is below the financial assurance threshold values in appendix B of 10 CFR part 30, NRC's expectation is that the monitoring performed under proposed § 20.1501(a) would be of a simple form, as discussed in draft regulatory guidance released with this proposed rule. Simple form monitoring is a method that confirms the absence of leaks or spills to the subsurface. The risk is low that any of these sites would cause contamination to create a potential radiological hazard or a future legacy site.

NRC's expectation is that no additional surveys will be required of power reactor licensees and fuel cycle facilities. For power reactors, NRC staff concludes that the monitoring and survey processes and related reports prepared at power reactor sites likely would contain sufficient information to satisfy the proposed §§ 20.1406(c) and 20.1501 requirements. NRC is

not requiring licensees to submit reports, but the information must be kept onsite in records that are available for review. It is not expected that power reactor licensees would need to install additional monitoring equipment or modify existing operating procedures to satisfy the proposed 20.1501(a) requirements. But, it may be necessary for such licensees to take these actions if, for example, significant residual radioactivity is identified at a power reactor site at a level higher than had been previously identified. In any such situations, the need for additional monitoring would be determined on a case-by-case basis.

Fuel cycle facilities, such as uranium fuel fabrication plants, the gaseous diffusion enrichment plants, and the dry process natural uranium conversion/de-conversion facility, also perform surveys to detect radioactive release to the ground water. NRC staff concludes that the monitoring and survey processes and related reports prepared at these facilities likely would contain sufficient information to satisfy the proposed §§ 20.1406(c) and 20.1501 requirements. A high level of ALARA discipline for onsite spills and leaks is expected of the centrifuge enrichment plants and mixed oxide fabrication plant based on the information in their license applications (these facilities have not begun operations).

K. What Information Must the Licensee Collect under Proposed Changes to 10 CFR 20.1501?

NRC is proposing, at certain facilities that have significant subsurface contamination, licensee documentation of contaminating events and survey results, including ground-water monitoring surveys, and the retention of survey records until license termination, to facilitate later decommissioning of the facility.

For 10 CFR 20.1501(a), licensees must be able to demonstrate compliance with the regulations in part 20 through surveys that evaluate the magnitude and extent of radiation levels, and concentrations or quantities of residual radioactivity including that in the subsurface, and any potential radiation hazards of the radiation levels and residual radioactivity detected.

The sampling results would include the date, time, location, contaminants of interest and contamination levels, and the concentrations at which action is required to comply with regulations. The contaminants of interest are those used within the facility with half-lives long enough that they would require remediation during decommissioning to meet the unrestricted use criteria under 10 CFR 20.1402. Contaminants may also include both chemicals and radionuclides in the ground water from sources upstream of the NRC-licensed site because of the potential for interaction with releases from other sites. When ground water is being monitored, the surveys conducted by the licensee also would include hydro-geologic evaluations that lead to a determination of effective sampling and analysis, including accurate placement and installation of the wells, and well locations to determine the nominal ground water flow direction and preferential flow paths for each "aquifer" underlying the site. Licensees may need to perform surveys to demonstrate compliance with the new proposed paragraph 10 CFR 20.1406(c).

For 10 CFR 20.1501(b), licensees would document the records from surveys of subsurface residual radioactivity at the site as records important for decommissioning, under the requirements of §§ 30.35(g), 40.36(f), 50.75(g), 70.25(g), and 72.30(d). These records can be as simple as a description of the event, to include date, time, location, and the estimated quantities and activity levels of radioactive materials that were spilled or leaked. The documentation may describe the activation of a moisture alarm system used to indicate the presence of liquid in an area that is supposed to be dry. Contamination survey results must be included in these records if the surveys are considered important for decommissioning planning. The intent of 10 CFR 20.1501(b) recordkeeping is to address onsite subsurface residual radioactivity that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402.

L. How Would Licensees Report Required Information to the NRC?

There are no reporting requirements for licensees under proposed changes to 10 CFR 20.1406(c) and 20.1501.

Instead, NRC would require licensees to collect information and to have that information available for review. The information would need to be retained by licensees in records important for decommissioning under §§ 30.35(g), 40.36(f), 50.75(g), 70.25(g), and 72.30(d).

Under changes proposed to financial assurance regulations, under §§ 30.35(e), 40.36(d), Part 40 Appendix A Criterion 9(b), 70.25(e), and 72.30, reporting requirements would increase for materials licensees who must prepare a detailed cost estimate for decommissioning. Reporting requirements also would increase under § 50.82(a) for power reactor licensees who prepare a post-shutdown decommissioning activities report (PSDAR) or an annual financial assurance status report.

Under changes proposed to 10 CFR part 30, appendix A, licensees who use the parent company guarantee as financial assurance for decommissioning will have increased reporting requirements in proposed changes to the paragraph A.1 financial test, and in reporting of off-balance sheet transactions and verification of bond ratings, and in annual documentation of continuing eligibility to use the parent company guarantee. Licensees who use the self-guarantee as financial assurance for decommissioning under 10 CFR part 30, appendices C, D and E, also would have increased reporting requirements in proposed changes to report off-balance sheet transactions and annual documentation of continuing eligibility to use the self-guarantee.

Licensees would continue to submit information to the NRC by certified mail or through approved Electronic Information Exchange (EIE) methods. NRC requests comments regarding licensee reporting using a secure website accessible by licensees from the NRC public website. This would include submittal and updating of the DFP, decommissioning cost estimates,

information in the financial tests for the parent company guarantee and self-guarantees, decommissioning power reactor annual financial assurance status report, and other information for which licensees believe the use of a secure website would reduce their labor hours in responding to reporting requirements. Section IX of this document, Paperwork Reduction Act Statement, provides an estimate of the hours needed annually for licensees to complete the reporting requirements for each part with amended regulations.

M. What Financial Assurance Information Must Licensees Currently Report to the NRC?

Materials licensees with a license possession limit that is below the financial assurance threshold in 10 CFR part 30, appendix B, are not required to have financial assurance for decommissioning. For the licensees under 10 CFR parts 30, 40 and 70 with a license possession limit above the financial assurance threshold in 10 CFR part 30, appendix B, but below the threshold requiring a DFP, these licensees have an option of providing financial assurance based on an amount specified by regulation or based on a DFP with a site-specific cost estimate. Materials licensees with a license possession limit above the financial assurance threshold, and all 10 CFR part 72 licenses, must submit at intervals not exceeding 3 years, a DFP which includes a site-specific cost estimate, a description of the methods used to assure the funds, and a description of the means of adjusting the cost estimate.

Except for 10 CFR part 72 licensees, materials licensees must also provide the original of the financial instrument obtained to satisfy the financial assurance requirement.

For materials licensees, Chapter 4 in NUREG-1757, Volume 3, "Consolidated NMSS Decommissioning Guidance," provides details on information necessary to satisfy their financial assurance requirements. This document is available on the NRC website at: http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1757/.

Power reactor licensees, as required by 10 CFR 50.75(f)(1), must report on the status of their decommissioning funds at 2-year intervals. A power reactor licensee that is within 5 years of the end of its projected life, or will close within 5 years (before the end of its licensed life), or has already closed, must submit the report of funds status on an annual basis.

Applicants for power reactor and non-power reactor licenses, and reactor license holders, must submit a decommissioning report as required by 10 CFR 50.33(k). The decommissioning report is submitted once, and contains information indicating how reasonable assurance will be provided that funds will be available to decommission the facility, the method used to provide funds for decommissioning, and the means for adjusting periodically the amount to be provided.

For nuclear power reactor licensees, Chapter 2 in Regulatory Guide 1.159, "Assuring the Availability of Funds for Decommissioning Nuclear Reactors," provides details on the information necessary to satisfy their financial assurance requirements. This document is available on the NRC website at: http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/active/.

N. What are the Proposed Changes to the Financial Assurance Regulations?

Most of the proposed amendments are changes to financial assurance regulations for materials licensees. A few changes apply to decommissioning financial assurance for power reactor licensees. The proposed changes to financial assurance regulations are discussed in this section, under the following headings:

N.1 Require a trust fund for decommissioning under restricted release.

N.2 Require a trust fund for the prepayment option.

N.3 Require an upfront standby trust fund for the parent guarantee and self-guarantee options.

N.4 Require parent company to inform NRC of financial distress and submit to an Order.

N.5 Require guarantor payment immediately due to standby trust.

N.6 Allow intangible assets, with an investment grade bond, to meet some financial tests.

N.7 Increase the minimum tangible net worth for the guarantees' financial tests.

N.8 Clarify guarantees' bond ratings and annual demonstration submittals.

N.9 Invalidate the use of certification for financial assurance if there is contamination.

N.10 Other changes to financial assurance regulations.

Many of the proposed changes are currently in NRC guidance and are being codified in this proposed rule. The proposed amendments strengthen and clarify the financial assurance requirements. The NRC seeks to improve decommissioning planning and reduce the number of funding shortfalls caused in the past by (1) Overly optimistic decommissioning assumptions; (2) Lack of adequate updating of cost estimates during operation; and (3) Licensees falling into financial distress with financial assurance funds unavailable for decommissioning. The proposed changes increase licensee reporting requirements. The added reporting burden is estimated as part of the Paperwork Reduction Act Statement (Section IX of this document). The costs and benefits of other aspects of these proposed amendments are evaluated in the Regulatory Analysis in Section X of this document.

N.1 Require a trust fund for decommissioning under restricted release.

NRC is proposing changes to the regulations related to decommissioning financial assurance applied to planned restricted release sites.

The proposed rule would require, under § 20.1403(c), that the funds for financial assurance of long-term care and maintenance of a restricted release site must be placed into a trust segregated from the licensee's assets and outside the licensee's administrative control. Section 20.1403(c)(1) currently contains a cross reference to § 30.35(f)(1) that allows use of any of the financial instruments listed in § 30.35(f)(1) for providing financial assurance for long-term care and maintenance. The proposed rule would eliminate the reference to §30.35(f)(1).

The effect of this change would be to eliminate, as prepayment options, the escrow account, sureties and insurance, and the parent company and self-guarantee methods at restricted release sites. To date, no licensee has chosen to use, at a restricted release site, the options that the NRC is now proposing to eliminate. These options that would no longer be allowed possess characteristics that make their use inadvisable in the types of long-term care and maintenance situations involved in restricted release sites. The proposed rule would continue to permit government entities to use a statement of intent or to assume custody and ownership of a site.

Escrow accounts are not well suited to the protection of funds over a long term. The purpose normally served by an escrow is to collect or hold funds for an expense to be paid in the relatively near future (e.g., property tax escrows). The EPA concluded that a trust was more protective of funds because, under trust law, the title to property in a trust is transferred to the trustee (46 FR 2802, 2827; January 12, 1981). In an escrow account, title to the property remains with the grantor. Thus, escrow property is more likely to be subject to a creditor's claim than property held in trust. In addition, the law of trusts places obligations on the trustee to act in the interest of the beneficiary. In contrast, an escrow agent is responsible only for what is specified in the escrow agreement. The EPA concluded that it would be extremely difficult to draft an escrow agreement that adequately specifies all the actions that an escrow agent would need to take in all situations to assure the instrument served its intended purpose.

The surety methods and insurance also are not well suited to protect funds over the long term because these depend on contracts made by the former licensee. There are no actual funds set aside for future costs, rather, the methods are promises made by the issuer to pay at a future time. These methods require renewal to remain effective. They depend on the former licensee continuing to exist to make renewal payments for the surety or insurance instruments. The instrument lapses if the payments are not made. Under the existing rule, NRC may require

the issuer to pay the face amount before the lapse occurs. However, issuers may resist making the payment, which could delay obtaining and possibly reduce the amount of funds for long-term care and maintenance. Whether making the payment is resisted or not, when the funds are paid for the face amount, the funds will be placed in a trust account. That is, the response to the non-renewal of a surety is to create a trust to hold funds. The long-term nature of the obligation increases the possibility that circumstances may arise that would require a demand for payment. In view of the potential difficulties and delays, and recognizing that a trust fund is the preferred long-term instrument for holding funds, the surety and insurance methods of financial assurance for long-term maintenance and control would be eliminated.

Likewise, the parent company and self-guarantee mechanisms are not well suited for providing financial assurance at restricted release sites because these were designed to assure funding for the relatively limited time needed to complete most decommissioning projects under 10 CFR 20.1402. The former licensee, or its parent, must continue to exist to pay for long-term control and maintenance costs. If the former licensee, or its parent, ceases to exist, the self-guarantee or parent company guarantee have no source of funds to pay the costs. In addition, these guarantees presume the existence of a licensee subject to NRC authority. However, when the license is terminated, the NRC has no regulatory authority over the former licensee. Therefore, the self-guarantee and parent company guarantee would be eliminated as a financial assurance options at restricted release sites.

In contrast, the trust fund is best suited as a financial mechanism to assure the necessary long-term care and maintenance at restricted release sites. The trust fund can exist for long periods without need for renewal. It exists independently of the former licensee, and can continue to serve the purposes of control and maintenance even if the former licensee ceases to exist. The trustee has a fiduciary duty to serve the beneficiaries of the trust. The funds placed in the trust become property of the trust, and generally cannot be reached by

creditors of the former licensee. Trust funds have traditionally been used to provide for the long-term care and maintenance of parks and other public facilities, to care for cemeteries, and for similar purposes. The NRC is proposing to require the use of trust funds for the financial assurance for long-term care and maintenance at restricted release sites, unless a government entity provides long-term funding or assumes custody and ownership of the site.

A further change to 10 CFR 20.1403(c)(1) would be the addition of a requirement that the initial amount of the trust fund established for long-term care and maintenance be based on a 1 percent annual real rate of return on investment. A similar provision is currently contained in 10 CFR part 40, appendix A, Criterion 10, which provides that if a site-specific evaluation shows that a sum greater than the minimum amount specified in the rule is necessary for long-term surveillance following decontamination and decommissioning of a uranium mill site, the total amount to cover the cost of long-term surveillance must be that amount that would yield interest in an amount sufficient to cover the annual costs of site surveillance, assuming a 1 percent annual real rate of interest.

The NRC has concluded that a conservative estimate of the annual real rate of return is justified in the case of financial assurance for long-term care and maintenance under § 20.1403(c)(1). Although the NRC in 10 CFR 50.75(e)(1)(ii) allows a licensee of a nuclear power reactor that is using an external sinking fund to take credit for projected earnings on the external sinking funds (using up to a 2 percent annual real rate of return from the time of the future fund's collection through the decommissioning period), the reactor situation is distinguished by the continuing presence of the reactor licensee, who is obligated to provide additional funds if necessary. Long-term trust funds for surveillance and control are created when license termination relieves the licensee of any further obligation regarding the site. Therefore, no licensee is available to make up shortfalls in the fund, which reduces the likelihood that funds will be available when needed. A long period of low returns could deplete a

trust fund so that later higher returns would be insufficient to return the fund to the value needed to permit earnings to cover the recurring long-term costs. Consequently, a conservative rate of return is necessary to assure that funds will be available when needed. Over the past 30 years, 1975-2005, the annual real rate of return is 1.58 for U.S. Treasury Bills and 4.87 for government bonds. Thus, a 1 percent real rate of return is appropriate for assuring funds under the proposed § 20.1403(c)(1). The actual rate of return may exceed the 1 percent real rate. The trust agreement may contain provisions to return excess funds to the trust grantor if the fund balance significantly exceeds the amount needed to cover the recurring costs at the 1 percent rate.

The proposed rule would add a new § 20.1404(a)(5) specifying that one of the factors that the Commission must consider in determining whether to terminate a license under alternate criteria is whether the licensee has provided sufficient financial assurance to enable an independent third party (including a government custodian of a site) to assume and carry out responsibilities for any necessary control and maintenance of the site. This new section also would require that the financial assurance must be in the form of a trust fund, as specified in §20.1403(c). Although a requirement to supply financial assurance can be inferred from the current rule, this requirement is not stated explicitly.

N.2 Require a trust fund for the prepayment option.

The proposed rule would amend the list of prepayment financial methods that may be used to provide financial assurance for decommissioning to provide that prepayment shall only be in the form of a trust established for decommissioning costs (§§ 30.35(f)(1), 40.36(e)(1), 70.25(f)(1), and 72.30(c)(1)). The proposed rule would eliminate the four other prepayment options currently listed in those sections (i.e., the escrow account, government fund, certificate of deposit, and deposit of government securities). Three of these options (the government fund, certificate of deposit, and deposit of government securities) initially were authorized for use to

provide alternatives to licensees that elected not to use a trust fund as their prepayment mechanism, even though the NRC recognized that in the event of the licensee's bankruptcy, they provided somewhat less assurance that the funds would remain available to pay for decommissioning. However, no licensees have elected to use the government fund and deposit of government securities options, and only two have used a certificate of deposit. Because of their relative risk in bankruptcy and their non-use by licensees, the NRC has decided to eliminate them as alternatives for providing financial assurance for decommissioning.

The NRC recognizes that elimination of the escrow account option would affect some licensees who currently use escrows. The latest data compiled from the NRC's License Tracking System (LTS) indicates that approximately 25 escrows are in use. Because some licensees use more than one escrow, the number of licensees using escrows is slightly less than the number of escrows.

The staff has reviewed several studies of the situation of escrows in bankruptcy, and has concluded that the most accurate summary of the various assessments is as follows. The funds contained in escrows that are set up correctly before a licensee's entry into bankruptcy will likely be secure from transfer into the bankruptcy estate as assets of the debtor and they will not be reachable by the bankruptcy trustee using doctrines of fraudulent conveyance or voidable preference. However, correctly setting up an escrow is difficult, as noted in Section II.N.1 of this document. The NRC also is concerned that a determination of the legal status of an escrow may be subject to considerable delay. In addition to the time necessary to carry out a legal standing analysis, a bankruptcy trustee could attempt to use the automatic stay provisions of the bankruptcy code to stop payment by an escrow agent under the escrow, if that payment is occurring following the commencement of the bankruptcy action. While this attempt may fail, it could postpone the NRC's access to the funds held in the escrow and thereby preclude the

prompt commencement of decommissioning. Finally, the administrative costs of a trust fund are comparable to an escrow, so there is little economic benefit to using the escrow.

Elimination of the use of escrow accounts was discussed at the public stakeholder meeting held January 10, 2007. No stakeholders objected to the elimination of the escrow as a financial assurance method. Therefore, the proposed rule would eliminate the escrow as a method to provide financial assurance.

N.3 Require an upfront standby trust fund for parent guarantee and self-guarantee options.

The proposed rule would amend appendices A, C, D, and E to 10 CFR part 30 (amend Section III.D of appendix A; amend Section III.F and add a new Section III.G to appendix C; amend Section III.D and add a new Section III.E to appendix D; and add a new Section III.F to appendix E). The amendments would clarify that a parent company providing a parent company guarantee and a licensee providing a self-guarantee are required to set up a standby trust before they may rely on the guarantee for financial assurance, and would add criteria for selecting an acceptable trustee.

The existing regulations do not require the guarantor to set up a standby trust before it provides a parent company or self-guarantee. Instead, a standby trust must be set up and used to hold funds for decommissioning only in the event the NRC requires the guarantor to provide such funding for decommissioning. Setting up a standby trust at the time the guarantee is drawn upon could lead to a significant delay, and therefore creation of a standby trust at the commencement of the guarantee is recommended in regulatory guidance. A standby trust is necessary because the NRC cannot accept decommissioning funds directly. Under the "miscellaneous receipts" statute, 31 U.S.C. 3302(b), the NRC must turn over all payments received to the U.S. Treasury. Therefore, a standby trust is necessary to receive funds in the event the NRC requires the guarantor to put the funds into a segregated account. Creating a

standby trust before the guarantee is provided will avoid potential delays in initiating decommissioning that may be caused by delays in setting up the trust at a later date. In addition, the use of a trust protects the funds from creditors' claims, which may be necessary in the event the guarantor faces financial distress. Therefore, the proposed rule would require that the guarantor set up a standby trust. In addition, the proposed rule would provide that the Commission has the right to change the trustee. That power is necessary to assure that the trustee will faithfully execute its duties. Finally, to assure the trust agreement is adequate, the proposed rule would specify that an acceptable trust is one that meets the regulatory requirements of the Commission.

N.4 Require parent company to inform NRC of financial distress and submit to an Order.

Because a parent company is not usually an NRC licensee subject to the NRC's authority, the parent company guarantee option will include a contractual agreement by the parent company to submit to NRC payment orders (10 CFR part 30, appendix A, Section III.F).

The parent company has no present requirement to inform the NRC of financial distress that may adversely affect its ability to meet its guarantee obligations. Because the NRC needs to know if the parent guarantor is in financial distress to take steps to protect the funds guaranteed for decommissioning, the proposed rule would require the parent guarantor to notify the NRC in case of its financial distress, and its plan to transfer the guaranteed amount to the standby trust. In these situations, payments from the parent company will be immediately due and payable to the standby trust pursuant to an acceleration clause, discussed in Section II.N.5 of this document. A similar notification requirement is not necessary for a licensee guarantor because NRC regulations under 10 CFR 30.34(h), 40.41(f), 70.32(a)(9), and 72.44(a)(6) already require licensees to notify NRC of bankruptcy proceedings.

N.5 Require guarantor payment immediately due to standby trust.

The existing regulations do not address the possibility that the guarantor of the parent guarantee or self-guarantee may be in financial distress when it is required to provide alternate financial assurance. In cases where decommissioning is not being conducted at the time of an insolvency proceeding, creditors could argue that the debtor owes performance of decommissioning in the future, not money at the present time. That argument could potentially support a finding that no payment is owed to the standby trust. In that event, a division of assets to satisfy creditors' claims may not adequately protect resources needed to fund decommissioning. To provide a money claim on the assets of the guarantor that would cover the cost of decommissioning at the time of a division of assets, the proposed rule would authorize the Commission to make the amount guaranteed immediately due and payable to the standby trust (i.e., an acceleration clause).

The proposed rule would clarify that the guarantor's obligation is not capped at the guaranteed amount, but include costs in excess of the guaranteed amount if additional funds are required to complete decommissioning and termination of the license.

N.6 Allow intangible assets, with an investment grade bond, to meet some financial tests.

The existing regulations allow guarantees to be used as financial assurance for decommissioning by companies whose financial statements demonstrate a low risk of default for corporate obligations. A set of financial tests are prescribed in 10 CFR part 30, appendices A, C, D and E for companies who may qualify to use the guarantee methods. A requirement to use the parent company guarantee or self-guarantee as a financial assurance option is passing the tests on an annual basis. Some of the financial tests in 10 CFR part 30, appendices A, C, and E are done using bond valuations. In the past, only tangible assets were considered within the calculations performed under the financial tests. In response to an inquiry during the public stakeholder meeting on January 10, 2007, NRC staff considered whether allowing the use of

intangible assets would materially increase the risk of a shortfall in decommissioning funds. Staff concluded the risk of a shortfall in funding would not materially increase under the amendments in this proposed rule.

Financial accounting standards issued since the original decommissioning regulations were issued in 1988 now provide objective methods to value intangible assets. The change in accounting standards provides assurance that intangible asset valuation is reasonable. In addition, bond rating agencies include intangible assets in their evaluation of the financial stability of a company's bonds. This provides an independent check of the reasonableness of the company's valuation of its assets. The default rate remains low for bonds rated investment grade. To further assure a current bond rating adequately reflects the company's financial stability, amendments in the proposed rule would specify that the bond must be uninsured, uncollateralized, and unencumbered to be used in the financial test. Finally, the value of the nuclear facilities, both as tangible and intangible assets, are excluded from the calculation of net worth on grounds that those assets would not be available to produce funds for decommissioning after the facility is shut down. The staff concluded that permitting the use of intangible assets in conjunction with an investment grade bond rating would not materially increase the risk of a shortfall in decommissioning funding.

In addition, the guarantee methods require annual repassage of the test. Historical trends in bond ratings show that the time between receiving a rating that is below investment grade to the time of default is five years, on the average. The annual repassage requirement will normally provide adequate time for the guarantor to obtain alternative financial assurance. For the few cases where a default may occur in a short time, the acceleration clause discussed in N.4 and N.5 of this document, will provide a method to obtain funds in situations of financial distress.

Therefore, the proposed rule would allow the use of intangible assets, used in conjunction with an investment grade bond rating, to meet specified criteria in the financial tests for parent company and self-guarantees.

N.7 Increase the minimum tangible net worth for the guarantees' financial tests.

The current regulations require the entity seeking to pass the relevant financial test to have tangible net worth of at least $10 million. The proposed rule amendments would require tangible net worth of at least $19 million.

The $10 million in tangible net worth requirement was first adopted by the EPA in 1981, and the financial test adopted by the NRC in 1988 used the same criterion. The NRC believes that the criterion should be adjusted to represent the value in current dollars of $10 million in 1981. Therefore, it has calculated the new proposed tangible net worth amount using the most recent Implicit Price Deflator for Gross Domestic Product published by the Department of Commerce in its Survey of Current business, and the equivalent Implicit Price Deflator for 1981, by dividing the 2005 Implicit Price Deflator by the 1981 Implicit Price Deflator and multiplying the product times $10 million, as follows: (112.134 / 59.119) = 1.897 x $10 million = $19 million.

The proposed rule also would add a requirement in Section II.A.(1) of appendix C to 10 CFR part 30 for tangible net worth of at least $19 million. Currently, that component of the financial test for self-guarantee specifies only that the applicant or licensee must have tangible net worth at least 10 times the current decommissioning cost estimate or certification amount. The proposed amendment would specify tangible net worth of $19 million and 10 times the amount required. This proposed amendment would make the self-guarantee financial test in appendix C to 10 CFR part 30 consistent with the tests in appendices A and D to 10 CFR part 30.

N.8 Clarify guarantees' bond ratings and annual demonstration submittals.

The proposed rule amendments would specify that the current rating of the most recent bond issuance of AAA, AA, or A by Standard and Poor's could include adjustments of + or - (i.e., AAA+, AA+, or A+ and AAA-, AA-, and A- would meet the criterion) and the current rating of Aaa, Aa, or A by Moody's could include adjustments of 1, 2, or 3.

Standard and Poor's and Moody's have introduced the plus or minus and numerical adjustments to refine the precision of their ratings. As a result, licensees have been uncertain whether a rating that includes these adjustments, and in particular ratings that might be considered below the unadjusted ratings specified in the appendices (e.g., A-) could be used. Based on the minimal difference in default rate associated with the qualifiers, the proposed rule would state that all the bonds within a specified rating level meet the regulatory standard.

In addition, the proposed rule would amend Section II.A.2.(i) of appendix A to 10 CFR part 30 and Section II.A.(3) of appendix C to 10 CFR part 30 to require the bond to be the most recent "uninsured, uncollateralized, and unencumbered" bond issuance. This amendment would make the bond criterion in appendix A to 10 CFR part 30 and appendix C to 10 CFR part 30 consistent with the bond criterion in appendix E to 10 CFR part 30. As explained in NUREG/CR-6514, where a rated bond has insurance or pledged assets to provide additional security, the bond rating may not directly reflect the creditworthiness of the bond issuer. Therefore, the proposed rule would add the requirement that the bond rating used to pass the financial test must be uninsured, uncollateralized, and unencumbered.

The proposed rule would make a conforming change in Section III.E. of appendix E to 10 CFR part 30 to provide that if, at any time, the licensee's most recent bond issuance ceases to be rated in any category of A or above by both Standard and Poor's and Moody's, the licensee no longer would meet the requirements of the financial test.

The proposed amendments to the bond rating criterion in appendices A and C to 10 CFR part 30 are intended to clarify the intent of the rule, eliminate an unintended apparent

inconsistency among the different financial tests that may be used, and to make administration of the financial assurance requirements more efficient by eliminating recurring questions.

The proposed rule would require a certified public accountant to verify that a bond rating, if used to demonstrate passage of the financial test, meets the requirements. Some financial tests received by the NRC did not apply the requirement correctly. Requiring an audit of the bond rating would minimize the potential that an error would be made.

The existing regulations require the licensee to repeat passage of the financial test each year, but do not explicitly state that the licensee must annually submit documentation to the NRC to verify its passage of the test. However, the parent company and self-guarantee agreements illustrated in regulatory guidance include a provision that the licensee will annually submit to NRC revised financial statements, financial test data, and an auditor's special report. Submittal of the documents permits NRC to verify the licensee's continuing eligibility to use the parent company guarantee without incurring the expense of an onsite inspection. Therefore, the proposed rule would codify the regulatory guidance to require annual submittal of documentation that the guarantor passed the financial test.

The existing regulations are unclear in stating that the parent company guarantee and financial test remain in effect until the license is terminated. The proposed regulations would clarify that the NRC's written acceptance of an alternate financial assurance by the parent company or licensee would allow the guarantee and financial test to lapse.

N.9 Invalidate the use of certification for financial assurance if there is contamination.

NRC is proposing additions to the regulations related to decommissioning financial assurance as applied to certifications. The proposed changes affect §§ 30.35(c)(6), 40.36(c)(5), and 70.25(c)(5).

The existing rule prescribes specific amounts of financial assurance for licensees that are authorized to possess relatively small amounts of radioactive material. Licensees

authorized to possess radioactive materials in higher amounts must submit a DFP, which includes a site-specific cost estimate for decommissioning. The site-specific cost estimate is almost always higher than the prescribed certification amounts.

The proposed rule would require licensees who qualify to use the certification amounts to submit a DFP in the event that survey results detect significant residual radioactivity within the site boundary, including the subsurface. A significant amount would be residual radioactivity that would, if left uncorrected, prevent the site from meeting the criteria for unrestricted use. Remediating subsurface contamination can be very expensive. However, licensees that qualify to use the certification amounts have no regulatory requirement to increase the amount of financial assurance to cover subsurface remediation costs. In the event subsurface contamination occurred at such a site, there would be no regulatory basis to require the licensee to increase its financial assurance to cover the potentially higher decommissioning cost. The proposed rule would provide the regulatory basis to require these licensees to cover the full cost, not just the certification amount.

N.10 Other changes to financial assurance regulations.

The proposed regulations would eliminate the line of credit option from 10 CFR 30.35(f), 40.36(e), 70.25(f), and 72.30(e) from the list of surety, insurance, or other guarantee methods that may be used to provide financial assurance for decommissioning. Although the line of credit was initially authorized for use to provide an alternative to licensees that elected not to use a surety or letter of credit, the NRC recognized that it posed a greater risk than the other two surety methods, because it might be subject to underlying loan covenants that could make it more vulnerable to cancellation if the licensee experienced financial difficulties. However, since 1988, no licensees have elected to use a line of credit to provide financial assurance for decommissioning. Because of its greater risk of cancellation and its non-use by licensees, the

NRC has decided to eliminate the line of credit as an alternative for providing financial assurance for decommissioning.

The proposed rule would exclude, in the financial tests for the parent guarantee and self-guarantee, the net book value of the nuclear facility and site from the calculation of tangible net worth. The existing rule requires that the calculation of tangible net worth must exclude the book value of the "nuclear units." That requirement may lead to confusion because it implies that it applies to nuclear reactor units, and not other kinds of nuclear facilities. However, other kinds of nuclear facilities should be excluded from the tangible net worth calculation because they are unlikely to provide funds for decommissioning. The existing rule does not specify whether the nuclear site, as distinguished from the facility, may be included in the calculation of tangible net worth. The value of the site is likely to depend on the probability that the decommissioning will be completed, and is subject to some degree of uncertainty. Therefore, the calculation of tangible net worth would be changed to exclude the net book value of the nuclear facility and site.

The proposed rule would require a certified public accountant to include an evaluation of off-balance sheet transactions, for the parent guarantee and self-guarantee. Generally accepted accounting principles (GAAP) permit certain kinds of transactions to be accounted for off the company's balance sheet. Many companies, as a means of managing risk and/or taking advantage of legitimate tax minimization opportunities, create off-balance-sheet transactions. It is important to understand the nature and the reason for each off-balance-sheet item, and ensure that any such relationships are adequately disclosed. (*Management's Summary of Off-Balance Sheet Transactions*, American Institute of Certified Public Accountants, http://www.aicpa.org, last visited February 8, 2007). The volume and risk of the off-balance-sheet activities need to be considered. (*Risk Management Manual of Examination Policies*, Federal Deposit Insurance Corporation, http://www.fdic.gov, last visited February 8, 2007) The

existing rule does not require the independent certified public accountant's special report to examine off-balance sheet transactions. However, these transactions have the potential to materially affect the guarantor's ability to fund decommissioning obligations. Therefore, the proposed rule would require the auditor to include an evaluation of off-balance sheet transactions.

O. Will Some Licensees Who Currently Do Not Have Financial Assurance Need To Get Financial Assurance?

No. Licensees who are not required to provide financial assurance for decommissioning will not have to obtain financial assurance as a result of amendments in this proposed rule.

The decommissioning planning and financial assurance amendments in this proposed rule only apply to licensees who currently have, or will have in the future, decommissioning financial assurance requirements under 10 CFR 30.35, 40.36, 50.75, 70.25, and 72.30.

If a licensee has survey records of residual radioactivity under the proposed new requirements in § 20.1501(b) or in an application for license transfer consistent with the proposed language in §§ 30.34(b)(2), 40.46(a)(2), or 70.36(a)(2), and the licensee has a possession and use quantity that is below the possession limit thresholds for financial assurance, then no decommissioning financial assurance is required.

All operating power reactor licensees are required to have financial assurance, consistent with 10 CFR 50.75(c), and all licensees with an independent spent fuel storage installation regulated under 10 CFR part 72 must have financial assurance for decommissioning in accordance with 10 CFR 72.30(c).

P. What is Changing with Respect to Materials Facilities' Decommissioning Funding Plan (DFP) and Decommissioning Cost Estimate (DCE)?

The proposed rule would require certain licensees under 10 CFR part 72 to adjust their DCE within 3 years of the previous DCE. This was done by final rule on October 3, 2003 (68 FR 57327) for licensees under 10 CFR parts 30, 40 and 70. This provision in the proposed rule would make the timing basis for DCE adjustments consistent among all materials facilities.

Regarding DFPs, the proposed rule would make changes in §§ 30.35(e), 40.36(d), 70.25(e), and 72.30(b) to require additional information from licensees. NRC's experience indicates that underestimation of decommissioning costs can occur when the licensee assumes it will qualify for a restricted site release by meeting all of the 10 CFR 20.1403 requirements. If it turns out that these requirements cannot be met, and that an unrestricted site release under 10 CFR 20.1402 will be required, the licensee may not have the ability to fund a potentially more expensive cleanup. For example, if instead of leaving large volumes of slightly contaminated soil onsite in a restricted release decommissioning, the licensee must ship this material offsite for disposal to support an unrestricted site release, the decommissioning will typically be much more expensive due to high offsite disposal costs. Therefore, the proposed rule would require the licensee to estimate and cover the costs to decommission the facility to meet unrestricted use criteria. The option of meeting the 10 CFR 20.1403 restricted release requirements will be available, but the licensee would have to demonstrate it can meet those criteria before a cost estimate based on that assumption would be acceptable.

In addition, certain operational events can increase decommissioning costs above the original estimate. These events include spills, increases in onsite waste inventory, increases in waste disposal costs, facility modifications, changes in authorized possession limits, actual remediation costs that exceed the initial cost estimate, onsite disposal, and use of settling ponds. The proposed amendments to 10 CFR 30.35(e)(2), 40.36(d)(2), 70.25(e)(2), and 72.30(b) would require the 3 year update of the DFP to consider these events for the effect, if any, they may have on the estimated cost of decommissioning. Subsurface contamination can

be very expensive to remediate. The new regulations would require the licensee to estimate the volume of contaminated subsurface material that would require remediation, and provide financial assurance for the estimated cost of remediation. Early consideration and funding arrangements to cover increased costs will improve decommissioning planning and increase the likelihood that funds will be available when needed for site decommissioning.

Existing regulatory guidance identifies recommended methods for arriving at decommissioning cost estimates, and the NRC is codifying some of these recommended methods. To assure that funds will be adequate to complete decommissioning in the event the licensee is unable to do so, cost estimates would be required to include contractor overhead and profit. An adequate contingency factor is necessary to cover unanticipated costs that can arise after the decommissioning project begins. The key assumptions underlying the cost estimate would have to be identified to aid the staff in evaluating the adequacy of the estimate. Codification of these recommendations is expected to improve the quality of DFP submittals, facilitate the staff's review of these submittals, and result in regulatory efficiencies.

NRC is aware of the records important for decommissioning reporting requirements licensees have under §§ 30.36(g)(1), 40.36(f)(1), 50.75(g)(1), 70.25(g)(1), and 72.30(d)(1). The proposed additional reporting requirements are designed to foster a better understanding of the impact the spill or contaminating event has on the decommissioning cost estimate.

Q. What is Changing With Respect to License Transfer Regulations for Materials Licensees?

The NRC proposes to make a set of parallel changes to §§ 30.34(b)(2), 40.46(a)(2), and 70.36(a)(2). This would codify NRC regulatory guidance to require the licensee to provide information on the proposed transferee's technical and financial qualifications, and to provide decommissioning financial assurance as a condition for approval of the transfer if the licensee is required to have financial assurance. The information and financial assurance are necessary to

evaluate the adequacy of the proposed transferee. Placing these provisions in the regulation, rather than keeping them in regulatory guidance, will improve regulatory efficiency by improving the quality of license transfer requests. It also will ensure that a prospective license transferee provides to the NRC the information necessary to determine that public health and safety are not compromised by the transfer and that the radiation safety aspects of the program are not degraded.

R. What is Changing with Respect to Permanently Shutdown Reactor Decommissioning Fund Status and Spent Fuel Management Plan Reporting?

The proposed rule would revise § 50.82(a)(4)(i), and add three new provisions (v-vii) to § 50.82(a)(8). The revised § 50.82(a)(4)(i) would require that the post-shutdown decommissioning activities report (PSDAR) include, if applicable, a cost estimate for managing irradiated fuel. Currently, the PSDAR must include a description of the planned decommissioning activities, a schedule for their accomplishment, and an estimate of expected costs.

The proposed additions to § 50.82(a)(8) would require each power reactor licensee undergoing decommissioning to submit, in the form of an annual financial assurance status report, information (specified below) regarding its decommissioning funds. Currently, under § 50.75(f)(1), the information reported to NRC by power reactor licensees is focused on collection of funds before permanent shutdown, and does not require information on the actual funds spent. To assess the adequacy of power reactor decommissioning funding after permanent shutdown, NRC needs to know the actual costs being incurred at decommissioned facilities. To obtain this information, the annual report would be required to include, among other things, the amount spent on decommissioning over the previous calendar year; the remaining balance of any decommissioning funds; and an estimate of the costs to complete

decommissioning. If the annual report reveals a projected funding shortfall, additional financial assurance to cover the cost to complete decommissioning will have to be provided. These proposed changes are expected to improve NRC oversight of decommissioning planning and increase the likelihood that funds for decommissioning will be available when needed. In Section II.V of this document, NRC seeks public comment on this topic.

Under proposed § 50.82(a)(8)(vii), the annual financial assurance status report must also include the status of funds to manage irradiated fuel. Due to the cessation of operating revenues, spent fuel management and related funding are a concern after the reactor is permanently shut down. Therefore, the proposed rule would require that the amount of funds accumulated to cover the cost of managing the spent fuel be specified; and that an estimate of the projected costs of spent fuel management until the Department of Energy takes title to the spent fuel be provided; and that a plan to obtain additional funds if the accumulated funds do not cover the projected cost be identified. These proposed changes are expected to increase the likelihood that funds for spent fuel management will be available when needed. In Section II.V of this document, NRC seeks public comment on this topic.

S. When Do These Proposed Actions Become Effective?

The new regulations would become effective 60 days after the final rule is published in the *Federal Register*. The NRC estimates that, at the earliest, the final rule will be published in October 2008.

T. Has NRC Prepared a Cost-Benefit Analysis of the Proposed Actions?

NRC staff has prepared a draft Regulatory Analysis for this rulemaking. The analysis examines the costs and benefits of the proposed action and two alternatives. Under the proposed action, the estimated total costs (2007$) are $109 million and $77 million over a

15-year analysis period at 3 percent and 7 percent discount rates, respectively. The estimated total costs were higher for each of the two alternatives. The cost (2007$) of implementing the proposed rule over the 15-year analysis period is about $43 million at 3 percent discount rate, with NRC licensee costs at $6 million, Agreement State licensee costs at $22 million, NRC administrative costs at $3 million, and Agreement State administrative costs at $12 million. The primary benefits of the proposed rule are due to reduction in the number of legacy sites and higher reliability of obtaining sufficient funds pledged for decommissioning financial assurance to complete the decommissioning work through license termination. The NRC seeks public comment on the draft Regulatory Analysis. For example, the NRC and Agreement States are aware of the existence of facilities and sites which have the potential to become contaminated with significant amounts of radium-226 from past practices or operations, or from the accumulation of radium-226 sources. Do members of the public have information about these sites to include them in the Regulatory Analysis as licensees affected by this proposed rule?

More information on this subject is in Section XI of this document.

The Backfit Analysis is included in the Regulatory Analysis, and is discussed in Section XIII of this document. The NRC seeks public comment on the Backfit Analysis.

U. Has NRC Evaluated the Additional Paperwork Burden to Licensees?

This proposed rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). NRC staff has estimated the impact this proposed rule would have on reporting and recordkeeping requirements of NRC and Agreement State licensees. The NRC seeks public comment on these estimates of additional burden to licensees from the proposed rule. More information on this subject is in Section IX, Paperwork Reduction Act Statement, of this document.

V. What Should I Consider as I Prepare My Comments to NRC?

When submitting your comments on this proposed rule:

1. Identify the rulemaking (RIN 3150-AH45).
2. Explain why you agree or disagree with the NRC proposal; suggest alternatives and substitute language for your requested changes.
3. Describe any assumptions and provide any technical information and/or data that you used.
4. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow NRC to reproduce your results.
5. Provide specific examples to illustrate your concerns, and suggest alternatives.
6. Explain your views as clearly as possible.
7. Submit your comments by the comment period deadline.
8. NRC has specifically requested comments regarding the following items:

(a) Can "fee incentives" be used, as permitted in 10 CFR 171.11(b), to induce licensees to characterize subsurface residual radioactivity while their facility is operating instead of waiting until the facility is in decommissioning?

(b) Should NRC investigate the use of a secure website for use by licensees to submit and update decommissioning reporting requirements, information in the financial tests for parent guarantees and self-guarantees, and other information that licensees believe will improve the efficiency of the decommissioning planning and reporting process?

(c) Can the additional details that would be required of decommissioned power reactor licensees in the PSDAR under proposed 10 CFR 50.82(a)(4)(i), and reporting of the actual costs of decommissioning before license termination as proposed under 10 CFR 50.82(a)(8)(v), be provided to NRC accurately without reference to confidential

information so that NRC may apply the information in reviewing similar decommissioning activities that are planned or in progress?

(d) Are the input assumptions, methodology and results in the draft Regulatory Analysis correct, including the Backfit Analysis? Is the conclusion in the draft Environmental Assessment correct of no significant environmental impact from the proposed rule?

(e) The NRC and Agreement States are aware of the existence of facilities and sites which have the potential to become contaminated with significant amounts of radium-226 from past practices or operations, or from the accumulation of radium-226 sources. Do members of the public have information about these sites to include them in the Regulatory Analysis as licensees affected by this proposed rule?

III. Discussion of Proposed Amendments by Section.

As stated previously, the Commission approved the staff's recommendation to proceed with a proposed rulemaking in SRM-SECY-03-0069 dated November 17, 2003. Staff's recommendations for changes in licensee operations to prevent future legacy sites were described in attachment 8 to the SECY. Two factors that were common among the existing legacy sites were: (1) They had chronic releases of radioactive material to the subsurface environment, and (2) NRC did not recognize the extent of this contamination until near cessation of operations. To address the problem of chronic releases, staff recommended a revision to § 20.1406 to make it applicable to current licensees. Staff recommended that it would emphasize procedural changes for existing licensees, and that physical changes to the facility only would be warranted when procedures fail to reduce releases. These recommendations are proposed for implementation in § 20.1406(c). To address the reporting deficiencies, staff recommended a risk-informed approach to require sites that experience events that contaminate the subsurface to perform surveys to characterize the extent and

migration of resultant plume(s), based on site conditions, and to record the survey information in records important for decommissioning. These are proposed for implementation in §§ 20.1501(a) and 20.1501(b).

SRM-SECY-03-0069 also approved staff's plans to add new, and amend existing financial assurance regulations, including the preparation of decommissioning cost estimates, the contents of DFPs, and acceptable financial assurance instruments used to support the DFP or the certification of funds used only by materials facilities. The recommended changes to financial assurance regulations and reporting requirements were described in attachment 7 to the SECY. Following analysis by NRC staff and input from stakeholders during public meetings, changes are proposed for implementation in 10 CFR parts 30, 40, 50, 70, and 72 to require more detailed reporting of decommissioning financial assurance information and to provide greater certainty to the NRC that adequate financial assurance will be available at the start of decommissioning activities.

The proposed amendments are discussed in numerical order below.

Section 20.1403 Criteria for license termination under restricted conditions.

The proposed rule would amend § 20.1403(c)(1) to require financial assurance funds to be placed into a trust segregated from the licensee's assets and outside the licensee's administrative control. The proposed rule would eliminate the licensee's option to use other prepayment financial mechanisms, such as the escrow account, government fund, certificate of deposit, or deposit of government securities. No licensee to date has used these other prepayment mechanisms to provide financial assurance for a restricted release site.

Amended § 20.1403(c)(1) would require that the initial amount of the trust fund established for long-term care and maintenance be based on a conservative assumption of a 1 percent annual real rate of return on investment.

The current § 20.1403(c)(2) would be deleted. This would remove the licensee's option to use a surety method, insurance, or other guarantee method to provide financial assurance for a restricted release site. The NRC has concluded that these mechanisms are more suitable for short-term rather than long-term investments, and are not well adapted to provide assurance that an independent third party will have the requisite funds to carry out necessary control and maintenance of the site following license termination. No licensee has to date used these financial mechanisms to provide financial assurance for long-term care of a restricted release site. The provisions for government entities to provide financial assurance for long term control and maintenance contained in existing §§ 20.1403(c)(3) and (4) would be retained but redesignated as §§ 20.1403(c)(2) and (3). Section II.N.1 of this document has more information on this proposed amendment.

Section 20.1404 Alternate criteria for license termination.

The proposed rule would add a new § 20.1404(a)(5) specifying a fifth criterion that the NRC must consider in determining whether to terminate a license under alternate site release criteria. This new fifth criterion is if the licensee has provided sufficient financial assurance in the form of a trust fund to enable an independent third party, including a government custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site.

Section 20.1406 Minimization of contamination.

The proposed addition of a new § 20.1406(c) is an extension of the policy articulated by the Commission in 1997, when the LTR was established (62 FR 39082; July 21, 1997). This policy is that licensees must conduct their operations to minimize waste during facility operations to facilitate later decommissioning and to achieve occupational and public doses that are ALARA. The term "residual radioactivity," as already defined in 10 CFR part 20, best identifies the type and scope of radioactive material that must be considered by licensees to

effectively plan for decommissioning activities during facility operations. The term includes licensed and unlicensed radioactive material. Section II.A of this document has more information on the proposed addition of § 20.1406(c).

Section 20.1501 General.

The 10 CFR 20.1501 survey requirements were added to the regulations in 1991, when 10 CFR part 20 was substantially revised (56 FR 23360; May 21, 1991). To date, these surveys have been done primarily to demonstrate compliance with occupational and public exposure limits, and effluent release regulations.

The current § 20.1501(a) requires licensees to perform surveys of potential radiological hazards. Subsurface contaminating events are not often a risk to occupational or public health and safety; however, experience has shown that these events, because they are not obvious or evident, are a risk for creation of a legacy site if contaminant characteristics are not addressed early when the facility is operating. A legacy site is a potential radiological hazard.

The proposed changes to § 20.1501(a) specify that these survey requirements include consideration of residual radioactivity, conforming to the new § 20.1406(c). The linkage between new § 20.1406(c) and amended § 20.1501(a) will require that surveys be performed if there is reason to believe that significant subsurface contamination is present which constitutes a potential radiological hazard. Section II.A describes these survey requirements in more detail.

The proposed new § 20.1501(b) would require licensees to maintain records from surveys describing the location and amount of subsurface residual radioactivity identified at the site with records important for decommissioning. Existing § 20.1501(b) would be designated as (c) and existing § 20.1501(c) would be designated as (d).

Section 30.34 Terms and conditions of licenses.

Section 30.34(b) pertains to license transfers. Existing § 30.34(b) would be designated as (b)(1) and a new paragraph (b)(2) would be added to require that an application for license

transfer must include the proposed transferee's identity, its technical and financial qualifications, and a showing that it will be able to provide adequate financial assurance for decommissioning.

Existing §§ 40.46 and 70.36 contain parallel provisions to those in § 30.34(b). Sections 40.46 and 70.36 would be re-designated as §§ 40.46(a) and 70.36(a). New §§ 40.46(b) and 70.36(b) will parallel the new § 30.34(b)(2) provisions described previously.

Section 30.35 Financial assurance and recordkeeping for decommissioning.

Several changes would be made to these requirements, and parallel changes would be made in §§ 40.36(c) and 70.25(c). These proposed changes are discussed below.

A new paragraph (c)(6) would be added to 10 CFR 30.35 [and parallel §§ 40.36(c)(5) and 70.25(c)(5)], to reflect the proposed changes being made to the § 20.1501(a) survey requirements. If these surveys detect residual radioactivity at a site at levels that would, if left uncorrected, prevent the site from meeting the § 20.1402 criteria for unrestricted use, the licensee must submit a DFP within one year of when the survey is complete.

Existing § 30.35(e) [and in parallel add §§ 40.36(d)(1) and (d)(2), part 40 Appendix A, 70.25(e)(1) and (e)(2), and 72.30(b) and (c)] would be amended to contain new paragraphs (e)(1) and (e)(2). Section 30.35(e)(1) would require that each DFP submitted for review and approval must contain a DCE based on three cost components. Two of the cost components (a dollar amount adequate to cover the cost of an independent contractor to perform all decommissioning activities, and an adequate contingency factor) are described in existing guidance. The new cost component is an estimate of the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the decommissioning criteria. Additionally, the DCE must be based on the cost of meeting the § 20.1402 criteria for unrestricted use unless it can be adequately shown that the requirements of § 20.1403 will be met.

A new provision, § 30.35(e)(1)(ii), would require the licensee to identify and justify the basis for all key assumptions underlying the DCE.

Section 30.35(e)(1)(iii) retains the existing § 30.35(e) provision requiring a description of the method of assuring funds for decommissioning. Section 30.35(e)(1)(iv) retains the existing § 30.35(e) provision requiring a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the DCE. Section 30.35(e)(1)(v) retains the existing § 30.35(e) requirement that the DFP include "a signed original of the financial instrument" being used to provide financial assurance, if it has not been previously submitted and accepted as the financial instrument to cover the cost estimate for decommissioning.

New § 30.35(e)(2) would require that the DFP be submitted at the time of license renewal, and at intervals not exceeding 3 years with adjustments as necessary to account for changes in costs and the extent of contamination. The updated DFP must specifically consider the effect of the following events on the cost of decommissioning:

- Spills of radioactive material producing additional residual radioactivity in onsite subsurface material;
- Waste inventory increasing above the amount previously estimated;
- Waste disposal costs increasing above the amount previously estimated;
- Facility modifications;
- Changes in authorized possession limits;
- Actual remediation costs that exceed the previous cost estimate;
- Onsite disposal; and
- Use of a settling pond.

As discussed below, the proposed rule would amend the introductory language in 10 CFR 30.35(f), and amend paragraphs (f)(1) through (f)(3). Parallel changes would be made in

§§ 40.36(e), 40.36(e)(1), (e)(2) and (e)(3), 70.25(f), 70.25(f)(1), (f)(2) and (f)(3), 72.30(e), 72.30(e)(1), (e)(2) and (e)(3)].

Section 30.35(f) would be amended to require that the financial instrument used for decommissioning funding assurance include the licensee's name, license number, and docket number, and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. If there are any changes to this information, the licensee must submit financial instruments reflecting these changes within 30 days.

Revised § 30.35(f)(1) requires that the prepayment financial method be in the form of a trust. This parallels the rule text change in § 20.1403, eliminating the four other prepayment mechanisms (i.e., the escrow account, government fund, certificate of deposit, and deposit of government securities). No byproduct material licensees have elected to use the government fund and deposit of government securities mechanisms, and only 2 have used a certificate of deposit. Because of their relative risk in bankruptcy and their lack of use by licensees, the NRC has decided to eliminate them as alternatives for providing financial assurance for decommissioning. Approximately 25 byproduct material licensees use escrow accounts.

In § 30.35(f)(2), the proposed rule would eliminate the existing line of credit option as a guarantee method for financial assurance. No licensees have elected to use a line of credit to provide financial assurance for decommissioning.

In § 30.35(f)(3), the proposed rule would require an external sinking fund to be in the form of a trust, eliminating the escrow account, government fund, certificate of deposit, and deposit of government securities because of their relative risk of loss during bankruptcy.

A new § 30.35(h) [and in parallel new §§ 40.36(f), 70.25(h), and 72.30(g)] would be added, specifying that each licensee must use its financial assurance funds only for decommissioning activities. The new section also would require monitoring by the licensee of its investment balance in the decommissioning trust account. Conservative investments are

expected in the trust account. If the investment balance in the trust account is below the estimated cost of decommissioning, but is not below 75 percent of the cost, then the licensee must, within 5 days after the end of the calendar quarter, deposit funds into the trust account to fully cover the estimated cost. If the loss results in a balance that is below 75 percent of the amount necessary to cover the decommissioning cost, the licensee must, within 5 days of such occurrence, deposit funds into the trust account to fully cover the estimated cost. The licensee must report taking such actions to the NRC within 30 days.

Part 30 Appendices A, C, D, and E.

The proposed rule would make a set of parallel amendments to 10 CFR part 30, appendices A, C, D, and E. More information on these proposed changes is discussed in Sections II.N.3 through II.N.8 of this document. The types of guarantors for which the financial tests in these appendices apply are:

- Appendix A, Parent company guarantees;
- Appendix C, Self-guarantees;
- Appendix D, Self-guarantees by companies that have no rated commercial bonds;
- Appendix E, Self-guarantees by non-profit colleges, universities and hospitals.

In the financial test in section II.A in appendices A, C and D of part 30, the proposed rule would add language to allow the inclusion of intangible assets in the determination of net worth. Net worth is defined to exclude the net book value and goodwill of the nuclear facility and site. Tangible net worth is defined to exclude all intangible assets and the net book value of the nuclear facility and site. In appendix A, section II.A.2.(ii) would be revised to require the licensee to perform a net worth calculation instead of a tangible net worth calculation.

In the financial test in section II.A in appendices A, C and D of part 30, the proposed rule would require that the guarantor's tangible net worth be at least $ 19 million to pass one of the

criteria for that financial test. The current rule requires the company seeking to pass the Section II.A financial test to have tangible net worth of at least $ 10 million.

Each set of changes to Appendices A, C, D, and E would require the independent certified public accountant (who compares the data used in the financial tests against data in year-end financial statements) to evaluate the guarantor's off-balance sheet transactions regarding the impact these transactions may have on the guarantor's ability to pay decommissioning costs. The accountant would also have to verify bond ratings if these are used to pass the financial test.

For those licensees or guarantors that issue bonds and use the financial test under section II.B of appendices A, C and E of part 30, the proposed rule would specify that the current rating of the most recent bond issuance of AAA, AA, or A by Standard and Poor's could include adjustments of + or - (i.e., AAA+, AA+, or A+ and AAA-, AA-, and A- would meet the criterion) and the current rating of Aaa, Aa, or A by Moody's could include adjustments of 1, 2, or 3. In each of these appendices, the proposed rule also would require the bond to be the most recent "uninsured, uncollateralized, and unencumbered" bond issuance.

In each appendix A, C, D, and E of part 30, the proposed rule would make changes to the 90-day test to show continued eligibility for the licensee and guarantor. The current rule requires only the licensee to repeat passage of the test within 90 days after the close of each succeeding fiscal year. The proposed rule would apply the same requirement to the guarantor.

In each appendix A, C, D, and E to part 30, the proposed rule would amend section III to clarify that the guarantor would be required to set up a standby trust, with new criteria for selecting an acceptable trustee.

In appendix A to part 30, the proposed rule would amend section III to require that the parent company guarantor agree to make itself subject to Commission orders (e.g., order to make payments under the guarantee agreement). The parent company guarantor also would

have to agree to make itself jointly and severally liable with the licensee for the full cost of decommissioning with any additional costs not paid by the licensee to be paid by the parent company guarantor.

In each appendix A, C, D, and E to part 30, the proposed rule would amend section III to allow the Commission, in cases of the guarantor company's financial distress, to declare the financial assurance guaranteed by the guarantor to be immediately due and payable to the standby trust. The guarantor companies also would be required to notify the NRC, in writing, immediately following the occurrence of events signifying financial distress.

Section 40.36 Financial assurance and recordkeeping for decommissioning.

The proposed rule would amend § 40.36(c)(5) in changes that are parallel to those described under § 30.35(c)(6); would amend § 40.36(d)(1) and (d)(2) in changes that are parallel to those described under § 30.35(e)(1) and (e)(2); would amend § 40.36(e) in changes that are parallel to those described under § 30.35(f); and would amend § 40.36(f) in changes that are parallel to those described under § 30.35(h).

Section 40.46 Inalienability of licenses.

The proposed rule would amend § 40.46. The proposed changes are described under the section for § 30.34, above.

Part 40 Appendix A.

The proposed rule would amend Appendix A, Criterion 9, to part 40. The proposed changes are parallel to those described under §§ 30.35(e)(1) and 30.35(e)(2).

Section 50.75 Reporting and recordkeeping for decommissioning planning.

The proposed rule would eliminate the line of credit in § 50.75(e)(1)(iii)(A) as a guarantee method for financial assurance. No reactor licensees have elected to use a line of credit to provide financial assurance for decommissioning.

Section 50.82 Termination of license.

The proposed rule would revise § 50.82(a)(4)(i) requiring that additional details be included in the PSDAR. The PSDAR must now include a description of the planned decommissioning activities, a schedule for their accomplishment, and an estimate of expected costs. The proposed revision specifies that the PSDAR cost estimates include those for managing irradiated fuel.

The proposed rule also would add paragraphs (v) through (vii) to existing § 50.82(a)(8). New paragraph (v) would require that a power reactor licensee, that has submitted its certification of permanent cessation of operation, must report annually on the status of its radiological decommissioning funding on a calendar-year basis. The information contained in this financial assurance status report is discussed in Section II.R of this document.

New paragraph (vi) would require that if funds reported in the financial assurance status report are below the estimated cost to complete the decommissioning, the licensee would have to make up the difference.

New paragraph (vii) would require an annual report on the status of funds for managing irradiated fuel. This report would include the accumulated amount, the projected costs until title to the fuel is transferred to the Secretary of Energy, and the plan to obtain the necessary additional funds if the total projected cost is higher than the accumulated amount.

Section 70.25 Financial assurance and recordkeeping for decommissioning.

The proposed rule would amend § 70.25. The proposed changes are parallel to those described under § 30.35.

Section 70.36 Inalienability of licenses.

The proposed rule would amend § 70.36. The proposed changes are parallel to those described under § 30.34.

Section 72.13 Applicability.

References in § 72.13(c) to § 72.30 are corrected to conform with the proposed changes to § 72.30, whereby § 72.30(c) would become § 72.30(e), and § 72.30(d) would become § 72.30(f).

Section 72.30 Financial assurance and recordkeeping for decommissioning.

The proposed rule would amend § 72.30. The proposed changes are similar to those described under § 30.35(e), and two existing paragraphs are redesignated.

Section 72.50 Transfer of license.

The proposed rule would amend § 72.50 by adding a new paragraph (b)(3), requiring that the license transfer application describe the financial assurance that will be provided for the decommissioning under § 72.30.

IV. Criminal Penalties.

For the purpose of Section 223 of the Atomic Energy Act (AEA), the Commission is proposing to amend 10 CFR parts 20, 30, 40, 50, 70, and 72 under one or more of Sections 161b, 161i, or 161o of the AEA. Willful violations of the rule would be subject to criminal enforcement.

V. Agreement State Compatibility.

Under the "Policy Statement on Adequacy and Compatibility of Agreement State Programs" approved by the Commission on June 30, 1997, and published in the *Federal Register* on September 3, 1997 (62 FR 46517), this proposed rule would be a matter of compatibility between the NRC and the Agreement States, thereby providing consistency among the Agreement States and the NRC requirements. The NRC staff analyzed the proposed rule in accordance with the procedure established within Part III, "Categorization

Process for NRC Program Elements," of Handbook 5.9 to Management Directive 5.9, "Adequacy and Compatibility of Agreement State Programs" (a copy of which may be viewed at http://www.nrc.gov/reading-rm/doc-collections/management-directives/).

NRC program elements (including regulations) are placed into four compatibility categories (See the Draft Compatibility Table in this section). In addition, the NRC program elements also can be identified as having particular health and safety significance or as being reserved solely to the NRC. Compatibility Category A establishes program elements that are basic radiation protection standards and scientific terms and definitions that are necessary to understand radiation protection concepts. An Agreement State should adopt Category A program elements in an essentially identical manner to provide uniformity in the regulation of agreement material on a nationwide basis. Compatibility Category B establishes program elements that apply to activities that have direct and significant effects in multiple jurisdictions. An Agreement State should adopt Category B program elements in an essentially identical manner. Compatibility Category C establishes program elements that do not meet the criteria of Category A or B, but the essential objectives of which an Agreement State should adopt to avoid conflict, duplication, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. An Agreement State should adopt the essential objectives of the Category C program elements. Compatibility Category D establishes program elements that do not meet any of the criteria of Category A, B, or C, above, and, thus, do not need to be adopted by Agreement States for purposes of compatibility.

Health and Safety (H&S) are program elements that are not required for compatibility but are identified as having a particular health and safety role (i.e., adequacy) in the regulation of agreement material within the State. Although not required for compatibility, the State should adopt program elements in this H&S category based on those of the NRC that embody the essential objectives of the NRC program elements, because of particular health and safety

considerations. Compatibility Category NRC establishes program elements that address areas of regulation that cannot be relinquished to Agreement States under the Atomic Energy Act, as amended, or provisions of Title 10 of the Code of Federal Regulations. These program elements are not adopted by Agreement States.

The following table lists the parts and sections that would be revised and their corresponding categorization under the "Policy Statement on Adequacy and Compatibility of Agreement State Programs."

Compatibility Table for Decommissioning Planning proposed rule

Section	Change	Subject	Compatibility	
			Existing	New*
20.1403(c)(1)	Amend	Trust fund for restricted use	C	C
20.1403(c)(2)	Deleted	Acceptable financial assurance methods	C	C
20.1403(c)(3) & (4)	Redesignated	Government entity financial assurance	C	C
20.1404(a)(5)	Add	Trust fund for alternate criteria	-	C
20.1406(c)	Add	Minimize residual radioactivity	-	C
20.1501(a)	Amend	Surveys and monitoring	H&S	H&S
20.1501(b)	Add	Records from surveys	-	H&S
30.34(b)(1)	Redesignated	License transfer requirements	C	C
30.34(b)(2)	Add	License transfer requirements	-	C
30.35(c)(6)	Add	Assess subsurface contamination	-	D
30.35(d)	No change	Certification amounts financial assurance	H&S**	D
30.35(e)(1)	Amend	Contents of decommissioning funding plan	D***	H&S
30.35(e)(2)	Amend	Updates of decommissioning funding plan	D***	H&S
30.35(f)	Amend	Methods for financial assurance	D	D
30.35(h)	Add	Monitor the balance of funds	-	D
30 Appendix A	Amend	Parent company guarantee	D	D
30 Appendix C	Amend	Self-guarantee with bonds	D	D
30 Appendix D	Amend	Self-guarantee without bonds	D	D
30 Appendix E	Amend	Self-guarantee nonprofits	D	D
40.36(c)(5)	Add	Assess subsurface contamination	-	D
40.36(d)(1)	Amend	Contents of decommissioning funding plan	H&S	H&S
40.36(d)(2)	Amend	Updates of decommissioning funding plan	H&S	H&S
40.36(e)	Amend	Methods for financial assurance	D	D
40.36(g)	Add	Monitor the balance of funds	-	D
40.46(a)	Redesignated	License transfer requirements	C	C
40.46(b)	Add	License transfer information requirements	-	C
40 Appendix A Criterion 9(b)	Amend	Decommissioning cost estimates and financial surety [with 11e.(2)]	C	C
40 Appendix A Criterion 9(b)	Amend	Decommissioning cost estimates and financial surety [without 11e.(2)]	NRC	NRC
50.75(e)(1)	Amend	Surety as bond or letter of credit	NRC	NRC
50.82(a)(4)	Amend	Cost information in the PSDAR	NRC	NRC
50.82(a)(8)(v), (vi) & (vii)	Add	Cost information in the annual financial assurance status report	-	NRC
70.25(c)(5)	Add	Assess subsurface contamination	-	D
70.25(d)	No change	Certification amounts financial assurance	H&S**	D
70.25(e)(1)	Amend	Contents of decommissioning funding plan	D***	H&S
70.25(e)(2)	Amend	Updates of decommissioning funding plan	D***	H&S
70.25(f)	Amend	Methods for financial assurance	D	D
70.25(h)	Add	Monitor the balance of funds	-	D
70.36(b)	Add	License transfer requirements	-	C
72.30(b)	Amend	Contents of decommissioning funding plan	NRC	NRC
72.30(c)	Add	Updates of decommissioning funding plan	-	NRC
72.30(d)	Add	Assess subsurface contamination	-	NRC
72.30(e)	Amend	Methods for financial assurance	NRC	NRC
72.30(g)	Add	Monitor the balance of funds	-	NRC
72.50(b)(3)	Add	License transfer requirements	-	NRC

* proposed compatibility category
** The compatibility category for §§ 30.35(d) and 70.25(d) were incorrectly specified in the 68 FR 57334, October 3, 2003, Financial Assurance for Materials Licensees final rule. The correct category for both of these sections is D.
*** The compatibility category for §§ 30.35(e) and 70.25(e) were incorrectly specified in the 68 FR 57334 The correct category for both of these sections is H&S.

VI. Plain Language.

The Presidential memorandum dated June 1, 1998, entitled “Plain Language in Government Writing” directed that the Government’s writing be in plain language. The NRC requests comments specifically with respect to the clarity of the language used in the proposed rule. Comments should be sent to the address listed under the "ADDRESSES" caption of the preamble.

VII. Voluntary Consensus Standards.

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. There are no consensus standards regarding the methods for preparing decommissioning cost estimates or providing financial assurance for decommissioning that would apply to the requirements that would be imposed by this rule. Thus, the provisions of the Act do not apply to this rule.

VIII. Environmental Assessment and Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR part 51, that this rule, if adopted, would not have any significant environmental impacts, and therefore this rulemaking does not warrant the preparation of an environmental impact statement.

A copy of the Environmental Assessment and rule are available at the NRC worldwide website: http://www.nrc.gov/public-involve/doc-comment/omb/index.html for 75 days after the signature date of this notice

The proposed rule would require licensees to conduct their operations so as to identify the occurrence of residual radioactivity at their sites, particularly in the subsurface soil and ground water, and minimize the introduction of additional residual radioactivity. There are a variety of monitoring methods to evaluate subsurface characteristics, and these are highly site specific with respect to their effectiveness. One or more of the licensees affected by this proposed rulemaking may find that compliance with the monitoring requirements will mean the installation of ground water monitoring wells and surface monitoring devices at their sites. The installation of these monitoring devices and wells is generally expected to result in small environmental impacts due to their very localized nature.

During sampling and testing, the proposed rule introduces the potential for a small amount of increased occupational exposures. These exposures are expected to remain within 10 CFR part 20 limits and to be ALARA. If subsurface contamination is detected, licensees may choose to remediate when contamination levels are lower and more manageable, which could result in reduced future occupational exposure rates than if the contamination conditions were allowed to remain and become increasingly more hazardous. Licensees may alternatively choose to provide adequate funding in response to their knowledge of the extent of any subsurface contamination, which will better ensure that the area is remediated following decommissioning to a degree that supports public health and safety, and protection of the environment.

If significant onsite residual radioactivity in the subsurface is found due to the monitoring imposed by this rulemaking, such knowledge will better ensure the protection of public health and safety, and protection of the environment. Identifying and resolving the source of the

contamination will better ensure that waste is not allowed to migrate offsite. Early identification also provides more time to plan waste remediation strategies that are both safe and cost effective.

The NRC finds that this proposed rulemaking will not have a significant environmental impact. Comments on the draft Environmental Assessment may be submitted to the NRC as indicated under the ADDRESSES heading.

IX. Paperwork Reduction Act Statement.

This proposed rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the information collection requirements.

Type of submission, new or revision: Revision.

The title of the information collection: 10 CFR parts 20, 30, 40, 50, 70 and 72, Decommissioning Planning, Proposed Rule.

The form number if applicable: Not applicable.

How often the collection is required: Initially, periodically based on regulated activity, quarterly, annually, and at license termination.

Who will be required or asked to report: Licensees and applicants for nuclear power plants and research and test facilities; applicants for and holders of NRC licenses authorizing receipt, possession, use or transfer of radioactive source and byproduct material.

An estimate of the number of annual responses: 239 responses (10 CFR 20 - 0 responses; 10 CFR 30 - 151 responses; 10 CFR 40 - 29 responses; 10 CFR 50 - 9 responses; 10 CFR 70 - 49 responses; 10 CFR 72 – 1 response).

The estimated number of annual respondents: 227 (10 CFR 20 - 0 respondents; 10 CFR 30 - 139 respondents; 10 CFR 40 - 29 respondents; 10 CFR 50 - 9 respondents; 10 CFR 70 - 49 respondents; and 10 CFR 72 - 1 respondent).

An estimate of the total number of hours needed annually to complete the requirement or request: The total burden increase for this rulemaking is 1,210.5 hours (10 CFR 20 - 0 hours; 10 CFR 30 – 853.5 hours; 10 CFR 40 – 132.5 hours; 10 CFR 50 - 48 hours; 10 CFR 70 – 172.5 hours; 10 CFR 72 - 4 hour).

Abstract: The NRC is proposing to amend its regulations to improve decommissioning planning by its licensees who have operating facilities or who are required to have decommissioning financial assurance. A new section in 10 CFR 20.1406(c) and an amended § 20.1501(a) would require licensees to conduct their operations to minimize waste and to perform surveys of subsurface contamination. The amended regulations also would require licensees to report additional details in their decommissioning cost estimates, would eliminate two currently approved financial assurance mechanisms, and would modify the parent company guarantee and self-guarantee financial assurance mechanisms to authorize the Commission to make the amount guaranteed immediately due and payable to a standby trust if the guarantor is in financial distress. Finally, the amended regulations would require decommissioning power reactor licensees to report additional information on the costs of decommissioning and spent fuel management.

The U.S. Nuclear Regulatory Commission is seeking public comment on the potential impact of the information collections contained in the proposed rule and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?

4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

A copy of the OMB clearance package may be viewed free of charge at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, MD 20852. The OMB clearance package and rule are available at the NRC worldwide website: http://www.nrc.gov/public-involve/doc-comment/omb/index.html for 75 days after the signature date of this notice.

Send comments on any aspect of these proposed information collections, including suggestions for reducing the burden and on the above issues, by **[insert date 30 days after publication in the Federal Register]** to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to INFOCOLLECTS@NRC.GOV and to the Desk Officer, Nathan Frey, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0014; 0017; 0020; 0011; 0009; and 0132), Office of Management and Budget, Washington, DC 20503. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date. You may also e-mail comments to Nathan.Frey@omb.eop.gov or comment by telephone at (202) 395-4650.

X. Public Protection Notification.

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

XI. Regulatory Analysis.

The Commission has prepared a draft regulatory analysis on this proposed rulemaking. An analysis of the proposed rule was performed comparing it against two other alternatives over a 15-year analysis period, using 3 percent and 7 percent real discount rates. The NRC considers the costs of the proposed rule justified in view of the benefits. The primary benefit is a reduction in the number of legacy sites that may occur in the future. The baseline of the analysis assumes No Action is taken and five additional legacy sites require government assistance to achieve completion of decommissioning consistent with unrestricted use criteria. The estimated cost of the proposed rule, with amended regulations as presented in Section III of this document, is about 40 percent lower than if No Action is taken. A third alternative was evaluated that would provide a higher level of assurance than the proposed rule of obtaining funds guaranteed for decommissioning financial assurance, but this requirement of collateral for the guaranteed amount was too costly in relation to the added level of assurance it would provide.

The estimated cost to implement the proposed rule is about $43 million (2007$) at 3 percent discount rate, of which NRC licensee costs are about $6 million, Agreement State licensee costs are about $22 million, NRC administrative costs are about $3 million, and Agreement State administrative costs are about $12 million. The Regulatory Analysis provides a cost breakdown for activities related to implementation of the proposed rule by 10 CFR parts 20, 30, 40, 50, 70 and 72.

The Commission requests public comment on the draft Regulatory Analysis. A copy of the Regulatory Analysis and rule are available at the NRC worldwide website: http://www.nrc.gov/public-involve/doc-comment/omb/index.html for 75 days after the signature date of this notice.

XII. Regulatory Flexibility Certification.

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule would not, if promulgated, have a significant economic impact on a substantial number of small entities. Only about 300 NRC materials licensees are required to have decommissioning financial assurance and the large majority of these organizations do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the Small Business Size Standards set out in regulations issued by the Small Business Administration at 13 CFR part 121.

XIII. Backfit Analysis.

As discussed more fully in the draft Regulatory Analysis, the NRC has determined that the NRC's rules on backfitting, 10 CFR 50.109, 70.76, 72.62, and 76.76, do not require the preparation of a backfit analysis for this proposed rule. A backfit is the modification of equipment or procedures required to operate a facility resulting from new or amended NRC regulations, or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previously applicable staff position. The new or amended regulations in this proposed rule either clarify existing requirements, or require the collection and reporting of information using existing equipment and procedures. The proposed changes to requirements are not regulatory actions to which the backfit rule applies. The new and amended NRC regulations being proposed in this rulemaking are summarized below.

The "Minimization of contamination" requirements in 10 CFR 20.1406 would be amended by adding a new paragraph (c) to read as follows:

> (c) Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with existing radiation protection requirements in Subpart B and radiological criteria for license termination in Subpart E of this part.

This is not a backfit because it clarifies licensee requirements under two existing regulations applicable to licensed operations. To comply with the current ALARA dose requirements in 10 CFR 20.1101(b) and 10 CFR 20.1402 (within existing subparts B and E, respectively), licensees must have operating procedures to minimize the introduction of residual radioactivity into their site, including the subsurface. Otherwise, licensees may lack information to provide a basis to demonstrate that they have achieved – during the life cycle of the facility which includes the decommissioning phase – public and occupational exposures that are ALARA. Licensees should already have these procedures in place as part of their radiation protection program, and the proposed 20.1406(c) clarifies this requirement.

Existing 10 CFR 20.1501(a) is being revised by replacing its undefined phrase "radioactive material" with a defined term "residual radioactivity." As defined in existing 10 CFR 20.1003, residual radioactivity includes subsurface contamination within its scope, and the word "subsurface" is being added to 10 CFR 20.1501(a). This regulation (10 CFR 20.1501(a)(2)(iii)) already requires the evaluation of potential radiological hazards. Thus, as amended, 10 CFR 20.1501(a) makes clear that subsurface residual radioactivity is a potential radiological hazard, and that the radiological surveys required by this section must address subsurface residual radioactivity. This clarification of existing requirements does not require the preparation of a backfit analysis.

Another proposed amendment would add a new paragraph (b) to 10 CFR 20.1501, requiring that survey records describing the location and amount of subsurface residual radioactivity identified at a licensed site be kept with records important for decommissioning. Regulatory changes imposing information collection and reporting requirements do not constitute regulatory actions to which the backfit rule applies. Additionally, NRC licensees are already required to keep records important for decommissioning. See, e.g., 10 CFR 50.75(g),

70.25(g), and 72.30(d). Moreover, the new 10 CFR 20.1501(b) is not intended to require recordkeeping of any and all amounts of subsurface residual radioactivity, but only amounts that are significant to achieve effective decommissioning planning and ALARA dose requirements. For operating facilities, significant residual radioactivity is a quantity of radioactive material that would later require remediation during decommissioning to meet the unrestricted use criteria of 10 CFR 20.1402. Significant residual radioactivity in subsurface media, such as soil, is a component of waste because it must be removed and disposed of to meet unrestricted use criteria.

The proposed rule also revises decommissioning planning and financial assurance requirements in 10 CFR parts 30, 40, 50, 70 and 72. These revisions do not entail modifying any equipment or procedures required to operate the types of NRC-licensed facilities governed by 10 CFR Parts 50, 70 or 72. The proposed changes concern administrative matters which are outside the scope of protection afforded by the NRC's backfitting rules (10 CFR 50.109, 70.76, and 72.62). Therefore, preparation of a backfit analysis is not required for the proposed revisions to the decommissioning planning and financial assurance requirements.

Accordingly, the proposed rule's provisions do not constitute a backfit and a backfit analysis need not be performed. The draft regulatory analysis identifies the benefits and costs of the proposed rule, discusses the voluntary GPI, and evaluates other options for addressing the identified issues. The draft regulatory analysis constitutes a "disciplined approach" for evaluating the merits of the proposed rule and is consistent with the intent of the backfit rule.

The Commission requests public comment on the backfit issues summarized above and as set forth more fully in the draft Regulatory Analysis (which is available as discussed under the ADDRESSES heading). Single copies may be obtained from the contact listed under the FOR FURTHER INFORMATION CONTACT heading. Comments on the draft Backfit Analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

List of Subject Terms

10 CFR part 20

Byproduct material, Criminal penalties, Licensed material, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR part 30

Byproduct material, Criminal penalties, Government contracts, Intergovernmental relations, Isotopes, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

10 CFR part 40

Criminal penalties, Government contracts, Hazardous materials transportation, Nuclear materials, Reporting and recordkeeping requirements, Source material, Uranium.

10 CFR part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

10 CFR part 70

Criminal penalties, Hazardous materials transportation, Material control and accounting, Nuclear materials, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

10 CFR part 72

Administrative practice and procedure, Criminal penalties, Manpower training programs, Nuclear materials, Occupational safety and health, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistleblowing.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR parts 20, 30, 40, 50, 70, and 72.

PART 20--STANDARDS FOR PROTECTION AGAINST RADIATION

1. The authority citation for part 20 continues to read as follows:

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236, 2297f), secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note), Energy Policy Act of 2005, Pub. L. 109–58, 119 Stat. 594 (2005).

2. In § 20.1403, paragraph (c)(2) is removed, paragraph (c)(3) is redesignated as paragraph (c)(2), and paragraph (c)(4) is redesignated as paragraph (c)(3), and paragraph (c)(1) is revised to read as follows:

§ 20.1403 Criteria for license termination under restricted conditions.

*****

(c) ***

(1) Funds placed into a trust segregated from the licensee's assets and outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual 1 percent real rate of return on investment;

*****

3. In § 20.1404, paragraph (a)(5) is added to read as follows:

§ 20.1404 Alternate criteria for license termination.

(a) ***

(5) Has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are specified in § 20.1403(c) of this part.

*****

4. In § 20.1406, paragraph (c) is added to read as follows:

§ 20.1406 Minimization of contamination.

*****

(c) Licensees shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in Subpart B and radiological criteria for license termination in Subpart E of this part.

5. In § 20.1501, paragraph (b) is redesignated as paragraph (c) and paragraph (c) is redesignated as paragraph (d), the introductory text of paragraphs (a) and (a)(2) and paragraphs (a)(2)(ii) and (a)(2)(iii) are revised, and a new paragraph (b) is added to read as follows:

§ 20.1501 General.

(a) Each licensee shall make or cause to be made, surveys of areas, including the subsurface, that --

*****

(2) Are reasonable under the circumstances to evaluate --

*****

(ii) Concentrations or quantities of residual radioactivity; and

(iii) The potential radiological hazards of the radiation levels and residual radioactivity detected.

(b) Records from surveys describing the location and amount of subsurface residual radioactivity identified at the site must be kept with records important for decommissioning.

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PART 30 - RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

6. The authority citation for part 30 continues to read as follows:

Authority: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

Section 30.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 30.34(b) also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 30.61 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

7. In § 30.34, paragraph (b) is redesignated as paragraph (b)(1) and a new paragraph (b)(2) is added to read as follows:

§ 30.34 Terms and conditions of licenses.

*****

(b) ***

(2) An application for transfer of license must include:

(i) The identity, technical and financial qualifications of the proposed transferee; and

(ii) Financial assurance for decommissioning information required by § 30.35.

*****

8. In § 30.35, a new paragraph (c)(6) is added, and paragraph (e), the introductory text in paragraph (f), paragraph (f)(1), the introductory text of paragraph (f)(2) and paragraph (f)(3) are revised, and a new paragraph (h) is added to read as follows:

§ 30.35 Financial assurance and recordkeeping for decommissioning.

*****

(c) ***

(6) If, in surveys made under § 20.1501(a), residual radioactivity in the facility and environment, including the subsurface, is detected at levels that would, if left uncorrected, prevent the site from meeting the 10 CFR 20.1402 criteria for unrestricted use, the licensee must submit a decommissioning funding plan within one year of when the survey is completed.

*****

(e)(1) Each decommissioning funding plan must be submitted for review and approval and must contain –

(i) A detailed cost estimate for decommissioning, in an amount reflecting:

(A) The cost of an independent contractor to perform all decommissioning activities;

(B) The cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of 10 CFR 20.1403, the cost estimate may be based on meeting the 10 CFR 20.1403 criteria;

(C) The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination; and

(D) An adequate contingency factor.

(ii) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate;

(iii) A description of the method of assuring funds for decommissioning from paragraph (f) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

(iv) A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and

(v) A signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section (unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).

(2) At the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted, this can not be done until the updated decommissioning funding plan is approved.

The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(i) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material;

(ii) Waste inventory increasing above the amount previously estimated;

(iii) Waste disposal costs increasing above the amount previously estimated;

(iv) Facility modifications;

(v) Changes in authorized possession limits;

(vi) Actual remediation costs that exceed the previous cost estimate;

(vii) Onsite disposal; and

(viii) Use of a settling pond.

(f) The financial instrument must include the licensee's name, license number, and docket number, and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. The financial instrument submitted must be a signed original or signed original duplicate, except where a copy of the signed original is specifically permitted. Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) *Prepayment.* Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Commission.

(2) *A surety method, insurance, or other guarantee method.* These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to this part. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to this part. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to this part. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to this part. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

*****

(3) *An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may decrease by the amount being accumulated in the sinking fund.* An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no

surety or insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in paragraph (f)(2) of this section.

*****

(h) In providing financial assurance under this section, each licensee must use the financial assurance funds only for decommissioning activities and each licensee must monitor the balance of funds held to account for market variations. The licensee must replenish the funds, and report such actions to the NRC, as follows:

(1) If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee must increase the balance to cover the cost, and must do so within 5 days after the end of the calendar quarter.

(2) If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee must increase the balance to cover the cost, and must do so within 5 days of the occurrence.

(3) Within 30 days of taking the actions required by paragraphs (h)(1) or (h)(2) of this section, the licensee must report such actions to the NRC, and state the new balance of the fund.

9. In appendix A to part 30, section II, the introductory text of paragraph A, paragraphs A.1.(ii), A.1.(iii), A.2.(i), A.2.(ii), A.2.(iii), B and C.1. are revised, in section III paragraphs B, C and D are revised, and new paragraphs E, F, G and H are added to read as follows:

Appendix A to Part 30 - Criteria Relating to Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning

*****

II. Financial Test

A. To pass the financial test, the parent company must meet the criteria of either paragraph A.1 or A.2 of this section. For purposes of applying the appendix A criteria, tangible net worth must be calculated to exclude all intangible assets and the net book value of the nuclear facility and site, and net worth must be calculated to exclude the net book value and goodwill of the nuclear facility and site.

*****

(1) ***

(ii) Net working capital and tangible net worth each at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount if a certification is used); and

(iii) Tangible net worth of at least $ 19 million; and

*****

(2) ***

(i) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, A, or BBB (including adjustments of + and -) as issued by Standard and Poor's or Aaa, Aa, A, or Baa (including adjustment of 1, 2, or 3) as issued by Moody's; and

(ii) Net worth at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all nuclear facilities or parts thereof (or prescribed amount if a certification is used); and

(iii) Tangible net worth of at least $19 million; and

*****

B. The parent company's independent certified public accountant must compare the data used by the parent company in the financial test, which is derived from the independently audited, year-end financial statements for the latest fiscal year, with the amounts in such financial statement. The accountant must evaluate the parent company's off-balance sheet transactions

and provide an opinion on whether those transactions could materially adversely affect the parent company's ability to pay for decommissioning costs. The accountant must verify that a bond rating, if used to demonstrate passage of the financial test, meets the requirements of paragraph A of this section. In connection with the auditing procedure, the licensee must inform NRC within 90 days of any matters coming to the auditor's attention which cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

C.(1) After the initial financial test, the parent company must annually pass the test and provide documentation of its continued eligibility to use the parent company guarantee to the Commission within 90 days after the close of each succeeding fiscal year.

*****

III. Parent Company Guarantee

*****

B. If the licensee fails to provide alternate financial assurance as specified in the Commission's regulations within 90 days after receipt by the licensee and Commission of a notice of cancellation of the parent company guarantee from the guarantor, the guarantor will provide alternative financial assurance that meets the provisions of the Commission's regulations in the name of the licensee.

C. The parent company guarantee and financial test provisions must remain in effect until the Commission has terminated the license, accepted in writing the parent company's alternate financial assurances, or accepted in writing the licensee's financial assurances.

D. A standby trust to protect public health and safety and the environment must be established for decommissioning costs before the parent company guarantee agreement is submitted. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal Government agency or an entity which has the

authority to act as a trustee, whose trust operations are regulated and examined by a Federal or State agency. The Commission has the right to change the trustee. An acceptable trust will meet the regulatory criteria established in these regulations that govern the issuance of the license for which the guarantor has accepted the obligation to pay for decommissioning costs.

E. The guarantor must agree that it is jointly and severally liable with the licensee for the full cost of decommissioning, and that if the costs of decommissioning and termination of the license exceed the amount guaranteed, the guarantor will pay such additional costs that are not paid by the licensee.

F. The guarantor must agree that it would be subject to Commission orders to make payments under the guarantee agreement.

G. The guarantor must agree that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for the guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

(1) Declare that the financial assurance guaranteed by the parent company guarantee agreement is immediately due and payable to the standby trust set up to protect the public health and safety and the environment, without diligence, presentment, demand, protest or any other notice of any kind, all of which are expressly waived by guarantor; and

(2) Exercise any and all of its other rights under applicable law.

H. 1. The guarantor must agree to notify the NRC, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code, or the occurrence of any other event listed in paragraph G of this Appendix, by or against:

(i) The guarantor;

(ii) The licensee;

(iii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(iv) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(2) This notification must include:

(i) A description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the parent company guarantee for decommissioning will be transferred to the standby trust as soon as possible;

(ii) If a petition of bankruptcy was filed, the identity of the bankruptcy court in which the petition for bankruptcy was filed; and

(iii) The date of filing of any petitions.

10. In appendix C to part 30, in section II paragraphs A., B.(2) and B.(3) are revised, in section III paragraphs E and F are revised, and paragraphs G, H and I are added to read as follows:

Appendix C to Part 30—Criteria Relating to Use of Financial Tests and Self Guarantees for Providing Reasonable Assurance of Funds for Decommissioning

*****

II. Financial Test

A. To pass the financial test a company must meet all of the criteria set forth below. For purposes of applying the appendix C criteria, tangible net worth must be calculated to exclude all intangible assets and the net book value of the nuclear facility and site, and net worth must be calculated to exclude the net book value and goodwill of the nuclear facility and site. These criteria include:

(1) Tangible net worth of at least $ 19 million, and net worth at least 10 times the amount of decommissioning funds being assured by a self-guarantee, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used).

(2) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the amount of decommissioning funds being assured by a self-guarantee, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used).

(3) A current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + and -) as issued by Standard and Poor's, or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

B.***

(2) The company's independent certified public accountant must compare the data used by the company in the financial test, which is derived from the independently audited, year-end financial statements for the latest fiscal year, with the amounts in such financial statement. The accountant must evaluate the company's off-balance sheet transactions and provide an opinion on whether those transactions could materially adversely affect the company's ability to pay for decommissioning costs. The accountant must verify that a bond rating, if used to demonstrate

passage of the financial test, meets the requirements of section II paragraph A of this appendix. In connection with the auditing procedure, the licensee must inform NRC within 90 days of any matters coming to the auditor's attention which cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(3) After the initial financial test, the company must annually pass the test and provide documentation of its continued eligibility to use the self-guarantee to the Commission within 90 days after the close of each succeeding fiscal year.

*****

III. Company Self-Guarantee

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E. (1) If, at any time, the licensee's most recent bond issuance ceases to be rated in any category of ''A'' or above by either Standard and Poor's or Moody's, the licensee will notify the Commission in writing within 20 days after publication of the change by the rating service. (2) If the licensee's most recent bond issuance ceases to be rated in any category of A or above by both Standard and Poor's and Moody's, the licensee no longer meets the requirements of section II.A. of this appendix.

F. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will fund the standby trust in the amount guaranteed by the self-guarantee agreement.

G. (1) A standby trust to protect public health and safety and the environment must be established for decommissioning costs before the self-guarantee agreement is submitted. (2) The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal Government agency or an entity which has the authority to act

as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The Commission has the right to change the trustee. An acceptable trust will meet the regulatory criteria established in these regulations that govern the issuance of the license for which the guarantor has accepted the obligation to pay for decommissioning costs.

H. The guarantor must agree that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for the guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

(1) Declare that the financial assurance guaranteed by the parent company guarantee agreement is immediately due and payable to the standby trust set up to protect the public health and safety and the environment, without diligence, presentment, demand, protest or any other notice of any kind, all of which are expressly waived by guarantor; and

(2) Exercise any and all of its other rights under applicable law.

I. The guarantor must notify the NRC, in writing, immediately following the occurrence of any event listed in paragraph H of this appendix, and must include a description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the self-guarantee agreement for decommissioning will be transferred to the standby trust as soon as possible.

11. In appendix D to part 30 in section II, the introductory text of paragraph A., paragraphs A.(1), B.(1), and B.(2) are revised, in section III paragraph D is revised and paragraphs E, F and G are added to read as follows:

Appendix D to Part 30—Criteria Relating to Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Commercial Companies that have No Outstanding Rated Bonds

*****

II. Financial Test

A. To pass the financial test a company must meet all of the criteria set forth below. For purposes of applying the appendix D criteria, tangible net worth must be calculated to exclude all intangible assets and the net book value of the nuclear facility and site.

(1) Tangible net worth greater than $19 million, or at least 10 times the amount of decommissioning funds being assured by a self-guarantee, whichever is greater, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor for the total of all nuclear facilities or parts thereof (or the current amount required if certification is used).

*****

B. ***

(1) The company's independent certified public accountant must compare the data used by the company in the financial test, which is derived from the independently audited, year-end financial statements for the latest fiscal year, with the amounts in such financial statement. The accountant must evaluate the company's off-balance sheet transactions and provide an opinion on whether those transactions could materially adversely affect the company's ability to pay for decommissioning costs. In connection with the auditing procedure, the licensee must inform NRC within 90 days of any matters coming to the auditor's attention which cause the auditor to

believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(2) After the initial financial test, the company must annually pass the test and provide documentation of its continued eligibility to use the self-guarantee to the Commission within 90 days after the close of each succeeding fiscal year.

*****

III. Company Self-Guarantee

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D. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will fund the standby trust in the amount of the current cost estimates for decommissioning.

E. A standby trust to protect public health and safety and the environment must be established for decommissioning costs before the self-guarantee agreement is submitted. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal Government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The Commission will have the right to change the trustee. An acceptable trust will meet the regulatory criteria established in the part of these regulations that governs the issuance of the license for which the guarantor has accepted the obligation to pay for decommissioning costs.

F. The guarantor must agree that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment,

protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for the guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

(1) Declare that the financial assurance guaranteed by the self-guarantee agreement is immediately due and payable to the standby trust set up to protect the public health and safety and the environment, without diligence, presentment, demand, protest or any other notice of any kind, all of which are expressly waived by guarantor; and

(2) Exercise any and all of its other rights under applicable law.

G. The guarantor must notify the NRC, in writing, immediately following the occurrence of any event listed in paragraph H of this appendix, and must include a description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the self-guarantee agreement for decommissioning will be transferred to the standby trust as soon as possible.

12. In appendix E to part 30, in section II, paragraphs A.(1), B.(1), C.(1), and C.(2) are revised, in section III paragraphs D and E are revised and paragraphs F, G and H are added to read as follows:

Appendix E to Part 30—Criteria Relating to Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Nonprofit Colleges, Universities, and Hospitals

*****

II. Financial Test

A. ***

(1) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + or -) as issued by Standard and Poor's (S&P) or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

B.***

(1) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A (including adjustments of + or -) as issued by Standard and Poor's or Aaa, Aa, or A (including adjustments of 1, 2, or 3) as issued by Moody's.

*****

C.***

(1) The licensee's independent certified public accountant must compare the data used by the licensee in the financial test, which is derived from the independently audited, year-end financial statements for the latest fiscal year, with the amounts in such financial statement. The accountant must evaluate the licensee's off-balance sheet transactions and provide an opinion on whether those transactions could materially adversely affect the licensee's ability to pay for decommissioning costs. The accountant must verify that a bond rating, if used to demonstrate passage of the financial test, meets the requirements of section II of this appendix. In connection with the auditing procedure, the licensee must inform NRC within 90 days of any matters coming to the auditor's attention which cause the auditor to believe that the data specified in the financial test should be adjusted and that the licensee no longer passes the test.

(2) After the initial financial test, the licensee must repeat passage of the test and provide documentation of its continued eligibility to use the self-guarantee to the Commission within 90 days after the close of each succeeding fiscal year.

*****

III. Self-Guarantee

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D. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer or officer of the institution) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will fund the standby trust in the amount of the current cost estimates for decommissioning.

E. (1) If, at any time, the licensee's most recent bond issuance ceases to be rated in any category of ''A'' or above by either Standard and Poor's or Moody's, the licensee shall notify the Commission in writing within 20 days after publication of the change by the rating service. (2) If the licensee's most recent bond issuance ceases to be rated in any category of A or above by both Standard and Poor's and Moody's, the licensee no longer meets the requirements of section II.A. of this appendix.

F. (1) A standby trust to protect public health and safety and the environment must be established for decommissioning costs before the self-guarantee agreement is submitted. (2) The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal Government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency. The Commission has the right to change the trustee. An acceptable trust will meet the regulatory criteria established in the part of these regulations that governs the issuance of the license for which the guarantor has accepted the obligation to pay for decommissioning costs.

G. The guarantor must agree that if the guarantor admits in writing its inability to pay its debts generally, or makes a general assignment for the benefit of creditors, or any proceeding is instituted by or against the guarantor seeking to adjudicate it as bankrupt or insolvent, or

seeking dissolution, liquidation, winding-up, reorganization, arrangement, adjustment, protection, relief or composition of it or its debts under any law relating to bankruptcy, insolvency, or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian, or other similar official for guarantor or for any substantial part of its property, or the guarantor takes any action to authorize or effect any of the actions stated in this paragraph, then the Commission may:

(1) Declare that the financial assurance guaranteed by the self-guarantee agreement is immediately due and payable to the standby trust set up to protect the public health and safety and the environment, without diligence, presentment, demand, protest or any other notice of any kind, all of which are expressly waived by guarantor; and

(2) Exercise any and all of its other rights under applicable law.

H. The guarantor must notify the NRC, in writing, immediately following the occurrence of any event listed in paragraph G of this appendix, and must include a description of the event, including major creditors, the amounts involved, and the actions taken to assure that the amount of funds guaranteed by the self-guarantee agreement for decommissioning will be transferred to the standby trust as soon as possible.

PART 40--DOMESTIC LICENSING OF SOURCE MATERIAL.

13. The authority citation for part 40 continues to read as follows:

Authority: Secs. 62, 63, 64, 65, 81, 161, 182, 183, 186, 68 Stat. 932, 933, 935, 948, 953, 954, 955, as amended, secs. 11e(2), 83, 84, Pub. L. 95-604, 92 Stat. 3033, as amended, 3039, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2014(e)(2), 2092, 2093, 2094, 2095, 2111, 2113, 2114, 2201, 2232, 2233, 2236, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688 (42 U.S.C. 2021); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 275, 92 Stat. 3021, as amended by Pub. L. 97-415, 96 Stat. 2067 (42

U.S.C. 2022); sec. 193, 104 Stat. 2835, as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Section 40.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 40.31(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 40.71 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

14. In § 40.36, a new paragraph (c)(5) is added, paragraph (d), the introductory text in paragraph (e), and paragraphs (e)(1), the introductory text of paragraph (e)(2) and paragraph (e)(3) are revised, and a new paragraph (g) is added to read as follows:

§ 40.36 Financial assurance and recordkeeping for decommissioning.

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(c) ***

(5) If, in surveys made under 10 CFR 20.1501(a), residual radioactivity in the facility and environment, including the subsurface, is detected at levels that would, if left uncorrected, prevent the site from meeting the 10 CFR 20.1402 criteria for unrestricted use, the licensee must submit a decommissioning funding plan within one year of when the survey is completed.

(d)(1) Each decommissioning funding plan must be submitted for review and approval and must contain –

(i) A detailed cost estimate for decommissioning, in an amount reflecting:

(A) The cost of an independent contractor to perform all decommissioning activities;

(B) The cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of 10 CFR 20.1403, the cost estimate may be based on meeting the 10 CFR 20.1403 criteria;

(C) The volume of onsite subsurface material containing residual radioactivity that will require remediation; and

(D) An adequate contingency factor.

(ii) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate;

(iii) A description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

(iv) A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and

(v) A signed original, or if permitted, a copy, of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section (unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).

(2) At the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted, this can not be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(i) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material;

(ii) Waste inventory increasing above the amount previously estimated;

(iii) Waste disposal costs increasing above the amount previously estimated;

(iv) Facility modifications;

(v) Changes in authorized possession limits;

(vi) Actual remediation costs that exceed the previous cost estimate;

(vii) Onsite disposal; and

(viii) Use of a settling pond.

(e) The financial instrument must include the licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. The financial instrument submitted must be a signed original or signed original duplicate, except where a copy is specifically permitted. Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) *Prepayment.* Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Commission.

(2) *A surety method, insurance, or other guarantee method.* These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to this part. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to this part. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to this part. For nonprofit entities, such as

colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to this part. Except for an external sinking fund, a parent company guarantee or guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

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(3) *An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may decrease by the amount being accumulated in the sinking fund.* An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in paragraph (e)(2) of this section.

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(g) In providing financial assurance under this section, each licensee must use the financial assurance funds only for decommissioning activities and each licensee must monitor the balance of funds held to account for market variations. The licensee must replenish the funds, and report such actions to the NRC, as follows:

(1) If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee must

increase the balance to cover the cost, and must do so within 5 days after the end of the calendar quarter.

(2) If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee must increase the balance to cover the cost, and must do so within 5 days of the occurrence.

(3) Within 30 days of taking the actions required by paragraphs (g)(1) or (g)(2) of this section, the licensee must report such actions to the NRC, and state the new balance of the fund.

15. In § 40.46, the current paragraph is designated as paragraph (a) and a new paragraph (b) is added to read as follows:

§ 40.46 Inalienability of licenses.

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(b) An application for transfer of license must include:

(1) The identity, technical and financial qualifications of the proposed transferee; and

(2) Financial assurance for decommissioning information required by § 40.36 or appendix A to this part, as applicable.

16. In appendix A to part 40, section II Criterion 9 is revised to read as follows:

Appendix A to Part 40--Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content

*****

II. Financial Criteria

Criterion 9-- (a) Financial surety arrangements must be established by each mill operator before the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. The amount of funds to be ensured by such surety arrangements must be based on Commission-approved cost estimates in a Commission-approved plan, or a proposed revision to the plan submitted to the Commission for approval, if the proposed revision contains a higher cost estimate, for

(1) Decontamination and decommissioning of mill buildings and the milling site to levels which allow unrestricted use of these areas upon decommissioning, and

(2) The reclamation of tailings and/or waste areas in accordance with technical criteria delineated in Section I of this appendix.

(b) Each cost estimate must contain –

(1) A detailed cost estimate for decontamination, decommissioning, and reclamation, in an amount reflecting:

(i) The cost of an independent contractor to perform the decontamination, decommissioning and reclamation activities; and

(ii) An adequate contingency factor;

(2) An estimate of the amount of residual radioactive material in onsite subsurface material;

(3) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate; and

(4) A description of the method of assuring funds for decontamination, decommissioning, and reclamation.

(c) The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The plan must

include a signed original of the financial instrument obtained to satisfy the surety arrangement requirements of this criterion (unless a previously submitted and approved financial instrument continues to cover the cost estimate for decommissioning). The surety arrangement must also cover the cost estimate and the payment of the charge for long-term surveillance and control required by Criterion 10 of this section.

(d) To avoid unnecessary duplication and expense, the Commission may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or state agencies and/or local governing bodies for decommissioning, decontamination, reclamation, and long-term site surveillance and control, provided such arrangements are considered adequate to satisfy these requirements and that the portion of the surety which covers the decommissioning and reclamation of the mill, mill tailings site and associated areas, and the long-term funding charge is clearly identified and committed for use in accomplishing these activities.

(e) The licensee's surety mechanism will be reviewed annually by the Commission to assure, that sufficient funds would be available for completion of the reclamation plan if the work had to be performed by an independent contractor.

(f) The amount of surety liability should be adjusted to recognize any increases or decreases resulting from:

(1) Inflation;

(2) Changes in engineering plans;

(3) Activities performed;

(4) Spills, leakage or migration of radioactive material producing additional residual radioactivity in onsite subsurface material that must be remediated to meet license termination criteria;

(5) Waste inventory increasing above the amount previously estimated;

(6) Waste disposal costs increasing above the amount previously estimated;

(7) Facility modifications;

(8) Changes in authorized possession limits;

(9) Actual remediation costs that exceed the previous cost estimate;

(10) Onsite disposal; and

(11) Any other conditions affecting costs.

(g) Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability must be retained until final compliance with the reclamation plan is determined.

(h) The appropriate portion of surety liability retained until final compliance with the reclamation plan is determined will be at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance would be provided with a surety instrument which is written for a specified period of time (e.g., 5 years) that which must be automatically renewed unless the surety notifies the beneficiary (the Commission or the State regulatory agency) and the principal (the licensee) with reasonable time (e.g., 90 days) before the renewal date of their intention not to renew. In such a situation the surety requirement still exists and the licensee would be required to submit an acceptable replacement surety within a brief period of time to allow at least 60 days for the regulatory agency to collect.

(i) Proof of forfeiture must not be necessary to collect the surety. In the event that the licensee can not provide an acceptable replacement surety within the required time, the surety shall be automatically collected before its expiration. The surety instrument must provide for collection of the full face amount immediately on demand without reduction for any reason,

except for trustee fees and expenses provided for in a trust agreement, and that the surety will not refuse to make full payment. The conditions described previously would have to be clearly stated on any surety instrument which is not open-ended, and must be agreed to by all parties. Financial surety arrangements generally acceptable to the Commission are:

(1) Trust funds.

(2) Surety bonds.

(3) Irrevocable letters or credit.

(4) Parent company guarantee under appendix A to 10 CFR part 40.

(iv) Combinations of the above or other types of arrangements as may be approved by the Commission. If a trust is not used, then a standby trust must be set up to receive funds in the event the Commission or State regulatory agency exercises its right to collect the surety. The surety arrangement and the surety or trustee, as applicable, must be acceptable to the Commission. Self insurance, or any arrangement which essentially constitutes self insurance (e.g., a contract with a State or Federal agency), will not satisfy the surety requirement because this provides no additional assurance other than that which already exists through license requirements.

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES.

17. The authority citation for part 50 continues to read as follows:

Authority: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note). Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5841). Section 50.10 also issued under secs. 101, 185, 68 Stat. 955, as amended (42

U.S.C. 2131, 2235); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80 - 50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

18. In § 50.75, the introductory text of paragraph (e)(1)(iii)(A) is revised to read as follows:

§ 50.75 Reporting and recordkeeping for decommissioning planning.

*****

(e) ***

(1) ***

(iii) ***

(A) These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

*****

19. In § 50.82, paragraph (a)(4)(i) is revised, and paragraphs (a)(8)(v), (a)(8)(vi), and (a)(8)(vii) are added to read as follows:

§ 50.82 Termination of license.

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(a) ***

(4)(i) Within 2 years following permanent cessation of operations, the licensee shall submit a post-shutdown decommissioning activities report (PSDAR) to the NRC, and a copy to the affected State(s). The PSDAR must contain a description of the planned decommissioning activities along with a schedule for their accomplishment, a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements, and a site-specific decommissioning cost estimate, including the projected cost of managing irradiated fuel.

*****

(8) ***

(v) After submitting its site-specific decommissioning cost estimate required by paragraph (a)(4)(i) of this section, and until the licensee has completed its final radiation survey and demonstrated that residual radioactivity has been reduced to a level that permits termination of its license, the licensee must annually submit to the NRC, by March 31, a financial assurance status report. The report must include the following information, current through the end of the previous calendar year:

(A) The amount spent on decommissioning, both cumulative and over the previous calendar year, the remaining balance of any decommissioning funds, and the amount provided by other financial assurance methods being relied upon;

(B) An estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based;

(C) Any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and

(D) Any material changes to trust agreements or financial assurance contracts.

(vi) If the sum of the balance of any remaining decommissioning funds, plus earnings on such funds calculated at not greater than a 2 percent real rate of return, together with the amount provided by other financial assurance methods being relied upon, does not cover the estimated cost to complete the decommissioning, the financial assurance status report must include additional financial assurance to cover the estimated cost of completion.

(vii) After submitting its site-specific decommissioning cost estimate required by paragraph (a)(4)(i) of this section, the licensee must annually submit to the NRC, by March 31, a report on the status of its funding for managing irradiated fuel. The report must include the following information, current through the end of the previous calendar year:

(A) The amount of funds accumulated to cover the cost of managing the irradiated fuel;

(B) The projected cost of managing irradiated fuel until title to the fuel and possession of the fuel is transferred to the Secretary of Energy; and

(C) If the funds accumulated do not cover the projected cost, a plan to obtain additional funds to cover the cost.

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PART 70--DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

20. The authority citation for part 70 continues to read as follows:

Authority: Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282, 2297f); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C.

5841, 5842, 5845, 5846). Sec. 193, 104 Stat. 2835, as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 70.7 is also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.81 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.82 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

21. In § 70.25, a new paragraph (c)(5) is added, paragraph (e), the introductory text in paragraph (f), and paragraph (f)(1), the introductory text of paragraph (f)(2) and paragraph (f)(3) are revised, and a new paragraph (h) is added to read as follows:

§ 70.25 Financial assurance and recordkeeping for decommissioning.

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(c) ***

(5) If, in surveys made under 10 CFR 20.1501(a), residual radioactivity in the facility and environment, including the subsurface, is detected at levels that would, if left uncorrected, prevent the site from meeting the 10 CFR 20.1402 criteria for unrestricted use, the licensee must submit a decommissioning funding plan within one year of when the survey is completed.

*****

(e)(1) Each decommissioning funding plan must be submitted for review and approval and must contain –

(i) A detailed cost estimate for decommissioning, in an amount reflecting:

(A) The cost of an independent contractor to perform all decommissioning activities;

(B) The cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of 10 CFR 20.1403, the cost estimate may be based on meeting the 10 CFR 20.1403 criteria;

(C) The volume of onsite subsurface material containing residual radioactivity that will require remediation; and

(D) An adequate contingency factor.

(ii) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate;

(iii) A description of the method of assuring funds for decommissioning from paragraph (f) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility;

(iv) A certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning; and

(v) A signed original, or, if permitted, a copy, of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section (unless a previously submitted and accepted financial instrument continues to cover the cost estimate for decommissioning).

(2) At the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted, this can not be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of the following events on decommissioning costs:

(i) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material;

(ii) Waste inventory increasing above the amount previously estimated;

(iii) Waste disposal costs increasing above the amount previously estimated;

(iv) Facility modifications;

(v) Changes in authorized possession limits;

(vi) Actual remediation costs that exceed the previous cost estimate;

(vii) Onsite disposal; and

(viii) Use of a settling pond.

(f) The financial instrument must include the licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) *Prepayment.* Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Commission.

(2) *A surety method, insurance, or other guarantee method.* These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to this part. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are

as contained in appendix C to this part. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to this part. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to this part. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

*****

(3) *An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may decrease by the amount being accumulated in the sinking fund.* An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in paragraph (f)(2) of this section.

*****

(h) In providing financial assurance under this section, each licensee must use the financial assurance funds only for decommissioning activities and each licensee must monitor the

balance of funds held to account for market variations. The licensee must replenish the funds, and report such actions to the NRC, as follows:

(1) If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee must increase the balance to cover the cost, and must do so within 5 days after the end of the calendar quarter.

(2) If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee must increase the balance to cover the cost, and must do so within 5 days of the occurrence.

(3) Within 30 days of taking the actions required by paragraphs (h)(1) or (h)(2) of this section, the licensee must report such actions to the NRC, and state the new balance of the fund.

22. In § 70.36, the current paragraph is designated as paragraph (a) and a new paragraph (b) is added to read as follows:

§ 70.36 Inalienability of licenses.

*****

(b) An application for transfer of license must include:

(1) The identity, technical and financial qualifications of the proposed transferee; and

(2) Financial assurance for decommissioning information required by § 70.25.

PART 72--LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE

23. The authority citation for part 72 continues to read as follows:

Authority: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended; sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233, 2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended; 202, 206, 88 Stat. 1242, as amended; 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951, as amended by Pub. L. 102-486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241; sec. 148, Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); sec. 651(e), Pub. L. 109–58, 119 Stat. 806–10 (42 U.S.C. 2014, 2021, 2021b, 2111).

Section 72.44(g) also issued under secs. 142(b) and 148(C), (d), Pub. L. 100-203, 101 Stat. 1330-232, 1330-236 (42 U.S.C. 10162(b), 10168(c), (d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10165(g)). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2224 (42 U.S.C. 10101, 10137(a), 10161(h)). Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

24. In § 72.13, paragraph (c) is revised to read as follows:

§ 72.13 Applicability.

*****

(c) The following sections apply to activities associated with a general license: §§ 72.1; 72.2(a)(1), (b), (c), and (e); 72.3 through 72.6(c)(1); 72.7 through 72.13(a) and (c); 72.30(e) and (f); 72.32(c) and (d); 72.44(b) and (f); 72.48; 72.50(a); 72.52(a), (b), (d), and (e); 72.60; 72.62; 72.72 through 72.80(f); 72.82 through 72.86; 72.104; 72.106; 72.122; 72.124; 72.126; 72.140 through 72.176; 72.190; 72.194; 72.210 through 72.220, and 72.240(a).

*****

25. In § 72.30, paragraph (b) is revised, paragraph (c) is redesignated as paragraph (e) and the introductory text of paragraph (e), paragraphs (e)(1), the introductory text of paragraph (e)(2) and paragraph (e)(3) are revised, paragraph (d) is redesignated as paragraph (f), and new paragraphs (c), (d), and (g) are added to read as follows:

§ 72.30 Financial assurance and recordkeeping for decommissioning.

*****

(b) Each holder of, or applicant for, a license under this part must submit for NRC review and approval a decommissioning funding plan that must contain:

(1) Information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS.

(2) A detailed cost estimate for decommissioning, in an amount reflecting:

(i) The cost of an independent contractor to perform all decommissioning activities;

(ii) An adequate contingency factor; and

(iii) The cost of meeting the § 20.1402 of this chapter criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of § 20.1403, the cost estimate may be based on meeting the § 20.1403 criteria.

(3) Identification of and justification for using the key assumptions contained in the decommissioning cost estimate.

(4) A description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility.

(5) The volume of onsite subsurface material containing residual radioactively that will require remediation to meet the criteria for license termination.

(6) A certification that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning.

(c) At the time of license renewal and at intervals not to exceed 3 years the decommissioning funding plan must be re-submitted with adjustments as necessary to account for changes in costs and the extent of contamination. If the amount of financial assurance will be adjusted, this can not be done until the updated decommissioning funding plan is approved. The decommissioning funding plan must update the information submitted with the original or prior approved plan and must specifically consider the effect of the following events on decommissioning costs:

(1) Spills of radioactive material producing additional residual radioactivity in onsite subsurface material.

(2) Facility modifications.

(3) Changes in authorized possession limits.

(4) Actual remediation costs that exceed the previous cost estimate.

(d) If, in surveys made under 10 CFR 20.1501(a), residual radioactivity in soils or ground water is detected at levels that would require such radioactivity to be reduced to a level permitting release of the property for unrestricted use under the decommissioning requirements in part 20 of this chapter, the licensee must submit a new or revised decommissioning funding plan (as described in paragraph (e) of this section) within one year of when the survey is completed.

(e) The financial instrument must include the licensee's name, license number, and docket number; and the name, address, and other contact information of the issuer, and, if a trust is used, the trustee. When any of the foregoing information changes, the licensee must, within 30 days, submit financial instruments reflecting such changes. Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) *Prepayment*. Prepayment is the deposit before the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment must be made into a trust account, and the trustee and the trust must be acceptable to the Commission.

(2) *A surety method, insurance, or other guarantee method*. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, or letter of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to part 30 of this chapter. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to part 30 of this chapter. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to part 30 of this chapter. Except for an external sinking fund, a parent company guarantee or a guarantee by the applicant or licensee may not be used in combination with other financial methods to satisfy the requirements of this section. A guarantee by the applicant or licensee may not be used in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

*****

(3) *An external sinking fund in which deposits are made at least annually, coupled with a surety method, insurance, or other guarantee method, the value of which may decrease by the amount being accumulated in the sinking fund*. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund must be in the form of a trust. If the other guarantee method is used, no surety or insurance may be combined with the external sinking fund. The surety, insurance, or other guarantee provisions must be as stated in paragraph (e)(2) of this section.

*****

(g) In providing financial assurance under this section, each licensee must use the financial assurance funds only for decommissioning activities and each licensee must monitor the balance of funds held to account for market variations. The licensee must replenish the funds, and report such actions to the NRC, as follows:

(1) If, at the end of a calendar quarter, the fund balance is below the amount necessary to cover the cost of decommissioning, but is not below 75 percent of the cost, the licensee must increase the balance to cover the cost, and must do so within 5 days after the end of the calendar quarter.

(2) If, at any time, the fund balance falls below 75 percent of the amount necessary to cover the cost of decommissioning, the licensee must increase the balance to cover the cost, and must do so within 5 days of the occurrence.

(3) Within 30 days of taking the actions required by paragraphs (g)(1) or (g)(2) of this section, the licensee must report such actions to the NRC, and state the new balance of the fund.

25. In Section 72.50, paragraph (b)(3) is added to read as follows:

§ 72.50 Transfer of license.

*****

(b) ***

(3) The application shall describe the financial assurance that will be provided for the decommissioning of the facility under § 72.30.

* * * * *

Dated at Rockville, Maryland, this 7th day of January 2008.

For the Nuclear Regulatory Commission.

/RA/

Annette Vietti-Cook,
Secretary for the Commission.