

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 2, 50, and 51

RIN 3150-AE96

Decommissioning of Nuclear Power Reactors

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission is amending its regulations on the decommissioning procedures that lead to the termination of an operating license for nuclear power reactors. The final amendments clarify ambiguities in the current rule and codify practices that have been approved on a case-by-case basis. Some minor amendments pertain to non-power reactors and are for purposes of clarification and procedural simplification. The Commission believes that the final amendments will enhance efficiency and uniformity in the regulatory process of decommissioning nuclear power plants.

EFFECTIVE DATE: (60 days after the rule is published in the Federal Register)

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SUPPLEMENTARY INFORMATION:

Background

On June 27, 1988 (53 FR 24018), the Commission promulgated decommissioning regulations. In July 20, 1995 (60 FR 37374), the Commission issued proposed amendments to these regulations. A discussion of the current requirements and proposed amendments follows.

Current requirements.

Within 2 years after a licensee permanently ceases operation of a nuclear reactor facility, it must submit a detailed decommissioning plan to the NRC for approval, along with a supplemental environmental report that addresses environmental issues that have not already been

considered. Based on these submissions, the NRC reviews the licensee's planned activities, prepares a Safety Evaluation Report (SER) and an environmental assessment (EA), and either makes a negative declaration of impact (the usual case) or prepares an environmental impact statement (EIS). Upon NRC approval of the decommissioning plan, the Commission issues an order permitting the licensee to decommission its facility in accordance with the approved plan. As part of the approval process, the opportunity for a hearing under Subpart G of 10 CFR Part 2, is made available to the public. Once the decommissioning process is completed and the NRC is satisfied that the facility has been radioactively decontaminated to an unrestricted release level, the NRC terminates the license.

If the licensee chooses to place the reactor in storage and dismantle it at a later time, the initial decommissioning plan submission need not be as detailed as a plan for prompt dismantlement. However, before the licensee can begin dismantlement, a detailed plan and environmental report must be submitted and approved by the Commission.

Before the decommissioning plan is approved, the licensee cannot perform major decommissioning activities. If a licensee desires a reduction in requirements because of the permanent cessation of operation, it must obtain a license amendment for possession-only status. This is usually granted after the licensee indicates that the

reactor has permanently ceased operations and fuel has been permanently removed from the reactor vessel.

A licensee is required to provide assurance that at any time during the life of the facility, through termination of the license, adequate funds will be available to complete decommissioning. For operating reactors, the amount of decommissioning funding required is generically prescribed in 10 CFR 50.75. Five years before license expiration or cessation of operations, a preliminary decommissioning plan containing a site-specific decommissioning cost estimate must be submitted and the financial assurance mechanism must be appropriately adjusted. Finally, the decommissioning plan, submitted within 2 years after permanent cessation of operations, must provide a site-specific cost estimate for decommissioning and a correspondingly adjusted financial assurance mechanism. For delayed dismantlement of a power reactor facility, an updated decommissioning plan must be submitted with the estimated cost of decommissioning and the licensee must appropriately adjust the financial assurance mechanism. Before approval of the decommissioning plan, the licensee may not use the required decommissioning funds. Licensee use of these funds would be determined on a case-specific basis for premature closure, when accrual of required decommissioning funds may be incomplete.

Proposed amendments.

The degree of regulatory oversight required for a nuclear power reactor during its decommissioning stage is considerably less than that required for the facility during its operating stage. During the operating stage of the reactor, fuel in the reactor core undergoes a controlled nuclear fission reaction that generates a high neutron flux and large amounts of heat. Safe control of the nuclear reaction involves the use and operation of many complex systems. First, the nuclear reaction must be carefully controlled through neutron absorbing mechanisms. Second, the heat generated must be removed so that the fuel and its supporting structure do not overheat. Third, the confining structure and ancillary systems must be maintained and degradation caused by radiation and mechanical and thermal stress ameliorated. Fourth, the radioactivity resulting from the nuclear reaction in the form of direct radiation (especially near the high neutron flux areas around the reactor vessel), contaminated materials and effluents (air and water) must be minimized and controlled. Finally, proper operating procedures must be established and maintained with appropriately trained staff to ensure that the reactor system is properly operated and maintained, and that operating personnel minimize their exposure to radiation when performing their duties. Moreover, emergency response procedures must be established and maintained to protect the public in the event of an accident.

During the decommissioning stage of a nuclear power reactor, the nuclear fission reaction is stopped and the fuel (spent fuel assemblies) is permanently removed and placed in the spent fuel pool until transferred offsite for storage or disposal. While the spent fuel is still highly radioactive and generates heat caused by radioactive decay, no neutron flux is generated and the fuel slowly cools as its energetic decay products diminish. The spent fuel pool, which contains circulating water, removes the decay heat and filters out any small radioactive contaminants escaping the spent fuel assemblies. The spent fuel pool system is relatively simple to operate and maintain. The remainder of the facility contains radioactive contamination and is highly contaminated in the area of the reactor vessel. However, because the spent fuel is stored in a configuration that precludes the nuclear fission reaction, no generation of new radioactivity can occur. Safety concerns are greatly reduced regarding control of the nuclear reaction, and the resultant generation of large amounts of heat, high neutron flux and related materials degradation, and the stresses imposed on the reactor system. Contaminated areas of the facility must still be controlled to minimize radiation exposure to personnel and control the spread of radioactive material. This situation is now similar to a contaminated materials facility and does not require the oversight that an operating reactor would require.

Based on the preceding discussion, it should be noted that during the operating stage of the reactor a nuclear reaction must be sustained that has the potential during an accident to generate significant amounts of energy and radiation whose consequences can be severe. Moreover, the nature of maintaining and controlling a nuclear reaction and the complexity of systems and operations requirements necessary to prevent and mitigate adverse consequences requires considerable oversight by the NRC. During the decommissioning stage of the reactor, the potential for consequences that could result from an inadvertent nuclear reaction are highly unlikely. The systems required for maintaining the spent fuel in the spent fuel pool as well as the operations required to contain the remaining residual contamination in the facility and spent fuel pool are relatively simple. Consequently, the activities performed by the licensee during decommissioning do not have a significant potential to impact public health and safety and these require considerably less oversight by the NRC than during power operations.

The amendments proposed in July 20, 1995 (60 FR 37374), were intended to provide licensees with simplicity and flexibility in implementing the decommissioning process, especially with regard to premature closure. The proposed amendments were intended to clarify ambiguities in the current regulations, codify procedures and terminology that have been used in a number of specific cases, and

increase opportunities for the public to become informed about the licensee's decommissioning activities. The amendments were designed to establish a level of NRC oversight commensurate with the level of safety concerns expected during decommissioning activities.

A. **Initial activities.** The decommissioning process outlined in the proposed amendments was similar in approach to that in the current decommissioning rule, but included flexibility in the type of actions that can be undertaken without NRC approval. Once a licensee permanently ceases operation of the power reactor, no major decommissioning activities (as defined in the proposed rule) could be undertaken until the public and the NRC were provided information by the licensee. Information required from the licensee in a Post-Shutdown Decommissioning Activities Report (PSDAR) consisted of the licensee's proposed decommissioning activities and schedule through license termination, an assessment of whether such proposed activities are bounded by existing analyses of environmental impacts, and a general decommissioning cost estimate for the proposed activities. The PSDAR would be made available to the public for comment.

Ninety days after the PSDAR submittal to the NRC and approximately 30 days after a public information meeting is held in the vicinity of the reactor site, the licensee could perform major decommissioning activities if NRC does not offer an objection. Before

undertaking these activities, the licensee must provide certifications to the NRC that operations have permanently ceased and fuel has been permanently removed from the reactor vessel (elements not formally addressed in the current rule). Once these certifications have been provided to the NRC, the licensee could no longer operate the reactor.

Part 50 technical requirements would also be amended to properly cover the transition of the facility from operating to permanent shutdown status (which also is not explicitly covered in the current rule). Thus, a licensee who has permanently ceased operations and removed fuel from the reactor vessel would no longer need to obtain a license amendment to proceed with certain decommissioning activities within established regulatory constraints.

B. Major decommissioning activities. A major change from the current rule is that power reactor licensees would no longer be required to have an approved decommissioning plan before being permitted to perform major decommissioning activities. Under the proposed rule, licensees would be allowed to perform activities that meet the criteria proposed in § 50.59. Section 50.59 would be amended to include additional criteria to ensure that concerns specific to decommissioning are considered by the licensee. Based on NRC experience with licensee decommissioning activities, the Commission recognized that the § 50.59 process used by the licensee during

reactor operations encompassed routine activities that are similar to those undertaken during the decommissioning process. The Commission concluded that the § 50.59 process could be used by the licensee to perform major decommissioning activities if licensing conditions and the level of NRC oversight required during reactor operations are continued, commensurate with the status of the facility being decommissioned. These objectives were considered in the proposed rule as follows.

(1) The proposed rule would clarify, modify, and extend certain licensing conditions to decommissioning activities.

(2) Aside from changes to Part 50, the final safety analysis report (FSAR), which is a licensing basis document for performing activities under § 50.59, would need to be updated to cover decommissioning activities.

(3) A PSDAR would be submitted to the NRC that would contain a schedule of planned decommissioning activities and provide a mechanism for timely NRC oversight. The licensee would provide written notification to the NRC before performing any decommissioning activity that is inconsistent with or makes significant schedule changes from the PSDAR.

C. **License termination.** A licensee wishing to terminate its license would submit a license termination plan for approval similar

to the approach that is currently required for a decommissioning plan. However, the plan would be less detailed than the decommissioning plan required by the current rule, because it would not need to provide a dismantlement plan, and could be as simple as a final site survey plan. The approval process for the termination plan, as in the current rule, would provide for a hearing opportunity under 10 CFR Part 2. The proposed rule recognized that, if the spent fuel is either offsite or in an independent spent fuel storage facility (ISFSI), that is covered under a Part 72 license, the remaining facility licensed under Part 50 is similar to a materials facility and a less formal hearing, under Subpart L rather than Subpart G of Part 2, is more appropriate. As in the current rule, a supplemental environmental report would be required from the licensee that considers environmental impacts that are not already covered in existing EISs. An additional requirement, proposed for the purpose of keeping the public informed, is that a public meeting be held, after the licensee submits the license termination plan to the NRC, similar to the one held after the PSDAR submittal.

D. Financial assurance. The proposed rule would continue the same degree of financial assurance as the current rule, but provide more flexibility by allowing licensee's limited early use of decommissioning funds. This provision was presented in a draft policy

statement entitled "Use of Decommissioning Trust Funds Before Decommissioning Plan Approval" (59 FR 5216; February 3, 1994) that was published by the Commission for comment and incorporated into the proposed rule. The current rule does not allow use of such funds until the licensee's decommissioning plan is approved. However, the proposed rule eliminated the requirement for a decommissioning plan and instead required a PSDAR submittal, which requires a decommissioning cost estimate. The proposed rule permitted some small percentage (3%) of the generically prescribed decommissioning funds to be available to the licensee for planning purposes ("paper studies") before permanent cessation of power reactor operations. Moreover, to permit the licensee to accomplish major decommissioning activities promptly, an additional generic funding amount would be made available (20%) before a site-specific cost estimate, which must be submitted to the NRC within 2 years after permanent cessation of operations (as in the current rule). The remainder of the funds would be made available after submittal of the site-specific cost estimate, as in the current rule. When the licensee submits the license termination plan, the same financial considerations as those in § 50.82(c) of the current rule would be required to provide assurance that the licensee has adequate funds to complete decommissioning and terminate the license.

E. **License extension.** The proposed rule clarified that a license that has expired is not terminated until the Commission terminates it and further clarifies what conditions prevail under such circumstances.

F. **Grandfathering.** The proposed rule applied to power reactor licensees who do not have an approved decommissioning plan on the effective date of the final rule. Licensees that already have an approved plan could, at their option, follow the provisions of the proposed rule.

G. **Non-power reactors.** There were some minor clarifications and procedural simplifications in the proposed rule for the non-power reactor decommissioning process. Otherwise, the current rule remained essentially unchanged.

Response to Comments.

Thirty-four comment letters were received on the proposed rule from power reactor licensees, contractors, Government agencies, Agreement States, citizens groups, and individuals. The comment letters have been categorized into two groups representing commenters generally in favor of the proposed rule and those generally not in favor of the proposed rule. The commenters in favor of the rule (24)

consisted of power reactor licensees, contractors, Government agencies, and an Agreement State. The commenters not in favor of the rule (10) consisted of citizens groups, individuals, and an Agreement State. The comments have been summarized and addressed through issue categories based on the proposed rule.

Issue 1 - Proposed Rule Approach.

Comments. Commenters in support of the proposed rule were, to varying degrees, supportive of the proposed rule. There were a few commenters in this group who fully supported the proposed rule because it would facilitate efficient decommissioning of power plants by reducing regulatory burden, clarifying the applicability of regulations originally intended for operating reactors, allowing a phased approach to decommissioning, and allowing early partial use of the decommissioning trust fund. A few commenters supported the use of lessons learned from ongoing decommissioning projects, expanding public participation, and providing the rationale behind less formal NRC policies and practices in a way that satisfies the requirements of the Atomic Energy Act (AEA), Administrative Procedure Act (APA), and National Environmental Policy Act (NEPA).

While many commenters were generally supportive of the general concept of the proposed rule, they indicated that the proposed rule

did not go far enough in reducing unnecessary regulatory burden. They noted that the existing NRC requirements regarding operating reactors were more than adequate to encompass decommissioning activities and, if anything, should be relaxed rather than expanded. These recommended relaxations pertained to such items as a more liberal attitude toward collection and use of decommissioning trust funds, elimination of unnecessary criteria concerning the use of the proposed § 50.59, elimination of proposed mandatory public meetings, elimination of the proposed Post-Shutdown Decommissioning Activities Report (PSDAR) submittal, and elimination of the proposed license termination plan or eliminating its inclusion into the license by amendment, including elimination of the accompanying proposed Subpart L or G hearing opportunity.

Commenters not in favor of the proposed rule were not supportive of the proposed rule to varying degrees. Many of these commenters were strongly opposed to the proposed rule and indicated that it allowed nuclear power generators to have discretionary powers to regulate themselves; that NRC was abdicating its responsibility for protecting the health and safety of workers and the public; that, in allowing the decommissioning plan to be included in the Final Safety Analysis Report (FSAR) it could be revised without license amendment, thereby excluding the public from the process; and that major component removal should not be allowed before the decommissioning

plan is approved by the NRC. These commenters expressed a variety of views indicating that the existing rule should be left alone or that the current rule should be left basically in place but made more efficient through better implementation and should include greater opportunities for public participation. Finally, a few commenters indicated that significantly greater public participation and oversight are necessary than that prescribed in the proposed rule.

Response. The proposed rule was developed to allow more flexibility in dealing with premature closures, the decommissioning process in general, and the experience gained from recent decommissioning activities such as those at Fort St. Vrain, Shoreham, and Rancho Seco, as well as early component removal at Yankee Rowe and Trojan. The justification and intent of the final rule is unchanged. The NRC's primary concern, as the licensee transitions to decommissioning, is that the licensee will have sufficient funds to complete decommissioning and that the activities undertaken by the licensee will protect the public and the environment. The intent of this final rule is to streamline some of the decommissioning requirements for power reactor licensees, especially in approval of the decommissioning plan before major decommissioning activities can be undertaken and in early use of decommissioning trust funds.

Specific issues addressed in the final rule are discussed in greater detail below.

Issue 2 - PSDAR, FSAR, and update requirements.

Comments. Commenters in favor of the rule had various comments concerning the PSDAR, its required update, and the proposed update to the FSAR. Several commenters indicated that the PSDAR requirement should be eliminated because it is more stringent than requirements imposed on operating reactors, that the PSDAR should only require information (detailed schedule) pertaining to the current phase of decommissioning because dismantlement and site restoration may not occur for many years, that the word "synopsis" should be used to make it clear that the PSDAR is a high-level summary, and that there should be consistency in the criteria for assessing environmental impacts between the PSDAR and the proposed § 50.59 requirements. A few comments suggested making the reporting requirements more efficient by combining them and updating the PSDAR and FSAR together, requiring updates no more than once every 36 months, or using a single PSDAR for multi-reactor sites. Several comments suggested that the updating requirement for the PSDAR be eliminated because § 50.59 already requires annual reporting requirements, that the term "significant" used in the proposed § 50.82(a)(6) should be tied to the § 50.59 safety evaluation, and that the extent of deviation in the PSDAR schedule that is permissible without notice to the NRC should be clarified. Finally, there was a comment that the final rule should

make it clear that, if prompt decommissioning (dismantlement) is being pursued by the licensee, the PSDAR and license termination plan should be permitted to be the same document.

Commenters not in favor of the rule did not specifically address Issue 2. However, those commenters believed that the current rule requirements should be followed and that an approved decommissioning plan should be required before a licensee is permitted to perform major decommissioning activities.

Response. The purpose of the PSDAR is to provide a general overview for the public and the NRC of the licensee's proposed decommissioning activities until 2 years before termination of the license. The PSDAR is part of the mechanism for informing and being responsive to the public prior to any significant decommissioning activities taking place. It also serves to inform and alert the NRC staff to the schedule of licensee activities for inspection planning purposes and for decisions regarding NRC oversight activities. Because the final rule eliminates the need for an approved decommissioning plan before major decommissioning activities can be performed, the requirement to submit a PSDAR is less stringent than existing requirements for power reactor licensees.

The information required to be in the PSDAR is less detailed than the information required in the FSAR. Therefore, the PSDAR should not be combined with the FSAR because the two documents have different

purposes. The final rule requires a written notification if activities are anticipated that would be inconsistent with the PSDAR activities previously described. The licensee's consideration of such inconsistency would include any milestone scheduling changes of dismantlement tasks and significant increases in decommissioning costs from those described in the PSDAR. The final rule will explicitly include the requirement that activities that would result in significant increases to decommissioning costs from those presented in the PSDAR must be a consideration in the notification requirements of § 50.82(a)(7). It is intended that regulatory guidance addressing the PSDAR Standard Format and Content will be issued soon after the final rule is published.

Currently, FSAR updates are required annually or 6 months after a refueling outage provided the interval between updates does not exceed 24 months. Because the FSAR is the basis for the use of § 50.59, the updates will need to be timely, so the final rule specifies a 24-month FSAR update for decommissioning activities for those nuclear power reactor licensees that have submitted the certifications of permanent cessation of operation and permanent removal of the fuel from the reactor vessel.

If prompt decommissioning is desired by the licensee, the licensee could elect early submittal of the PSDAR, before cessation of operation, and then use of § 50.59 would be permitted at cessation of

operation, provided the certification of permanent fuel removal from the reactor vessel has been received and the public meeting had been held in advance. Although the PSDAR and License termination plan serve different purposes, and a formal approval process is required of the latter, the PSDAR and License termination plan can be combined. If a licensee chooses to combine the PSDAR and the License termination plan, the requirements for both would apply to the combined document, including the requisite waiting period, public meeting, and approval by amendment of the License termination plan. The procedure for approval of a License termination plan is similar to that currently required for approval of a decommissioning plan. For a multi-reactor site, the PSDAR could address the activities for all the reactors at the site if decommissioning of each will be undertaken at the same time.

Issue 3 - Ninety-Day Time Period Prior to Undertaking Major Decommissioning Activities.

Comment. Several commenters noted that the proposed 90-day waiting period before major decommissioning activities could be undertaken did not address a health and safety concern and that there are potentially high costs associated with such a delay because licensees could do a lot of dismantlement during this time that would

be more efficient and cost advantageous. These commenters emphasized that all activities could be carried out under § 50.59 and the current licensing basis. They further stated that, if the 90-day hold is retained, clarification is needed regarding the NRC's opportunity to interpose an objection to proceeding with major decommissioning and that the NRC review should be based on areas of significant safety. Finally, one commenter expressed a concern that the 90-day waiting period would not allow enough time for public participation, including consideration of comments received from the public after NRC notices the licensee's PSDAR submittal and during a public meeting.

Commenters not in favor of the rule did not specifically address Issue 3. However, those commenters believed that the current rule requirements should be followed and that an approved decommissioning plan should be required before a licensee is permitted to perform major decommissioning activities.

Response. The commenters have correctly noted that the 90-day waiting period does not just address a health and safety issue. The NRC has chosen a 90-day waiting period prior to allowing major decommissioning activities to occur as the minimal time necessary for the NRC to evaluate the licensee's proposed activities and to conduct a public meeting. The public meeting is informational and may be chaired by a local official, with a presentation of the regulatory process for decommissioning by the NRC, presentation of planned

decommissioning activities by the licensee, and participation by State representatives. A question and answer period would follow the presentations. By submitting the PSDAR before cessation of operation, a licensee could reduce the need for a waiting period (see the response to Issue 2 for an additional discussion on ways that the waiting period may be reduced).

Issue 4 - Proposed Rule Modifications to § 50.59.

Comment. Many commenters approved of some form of the proposed modifications to § 50.59. Many of these commenters noted that § 50.59(e) in the proposed rule is more stringent than the existing requirements for operating reactors. These commenters believed that the existing § 50.59 criteria are adequate. Several commenters stated that the four proposed constraints contained in § 50.59(e) are somewhat redundant to the proposed requirements in § 50.82; the PSDAR content plus update and the 90-day waiting period envelops issues addressed by these criteria. These commenters believed that if § 50.59(e) criteria were kept they should be in a regulatory guide and not in a rule. Comments specific to the four criteria and why they should be eliminated follow.

Section 50.59(e)(1)(i) concerning foreclosure of the site for unrestricted release. It was noted that any event that detracts from

this effort would be accidental in nature, and that the proposed rule provided no explanation of the types of activities that could result in foreclosing the site for unrestricted use.

Section 50.59(e)(1)(ii) concerning significantly increasing decommissioning costs. It was noted that cost estimate information is required prior to and through the decommissioning process, making this requirement unnecessary. Moreover, it was asserted that there is no logical correlation between the cost of a decommissioning activity and whether a license amendment should be required for that activity and that costs have never been a consideration in determining whether a proposed activity is consistent with the licensing basis for a plant. It was also noted that other regulatory bodies such as Public Utility Commissions and the Federal Energy Regulatory Commission, as well as economic pressure, will force a licensee to perform decommissioning cost effectively. It was recognized that actions taken by a licensee may diminish the decommissioning fund and it was suggested that the wording be changed to deal with actions that would "significantly inhibit the ability to fund decommissioning costs which would prevent successful decommissioning."

Section 50.59(e)(1)(iii) concerned environmental impacts not previously reviewed. It was noted that compliance with the operating license, technical specifications, and § 50.59 regarding unreviewed safety questions adequately preclude having significant adverse

environmental impact that have not been reviewed. Moreover, the requirement is redundant to the requirement concerning unreviewed environmental impacts required in the content of the PSDAR specified in § 50.82.

Section 50.59(e)(1)(iv) concerned violating the terms of the existing license. It was noted that this requirement is redundant with language in § 50.59(a) that allows licensees to proceed with an activity so long as it does not violate technical specifications or constitute an unreviewed safety question as defined by § 50.59(a)(2). Also, it was noted that a license amendment is required for changes in technical specifications under the current § 50.59(c).

Most commenters who opposed the use of proposed § 50.59 were not in favor of the rule. One commenter stated that the analysis of the dismantlement activities proposed under § 50.59 to determine whether or not the activity generates any unreviewed safety issue should be provided to the NRC, rather than rely on an NRC audit as existing regulations provide. This analysis would also provide this information to the public for examination. Several of the commenters indicated that an after-the-fact review of § 50.59 activities would provide insufficient regulatory protection. Finally, a commenter stated that the presence of an NRC inspector is essential during decommissioning activities.

Response. The Commission concluded that the proposed § 50.59(e)(1)(iv) is redundant and should be eliminated from the final rule. The Commission reconsidered the need for the remaining § 50.59(e)(1) requirements and determined that placing them in § 50.82 would be more appropriate. The Commission also concluded that the requirement ensuring that no major decommissioning activities occur that would significantly increase decommissioning cost could be overly burdensome. Instead, an appropriate constraint would be to prohibit any decommissioning activities that result in there no longer being reasonable assurance that adequate funds will be available for decommissioning. However, the NRC needs to be aware of changes in decommissioning activities that would result in significantly increasing decommissioning costs and would require written notification of such intended actions. The other paragraphs in § 50.59(e) were placed in § 50.82(a) to ensure that they will be considered as overall constraints on the licensee's decommissioning activities, rather than separately for each contemplated activity as proposed in § 50.59(e).

The purpose of retaining these requirements is to ensure that no decommissioning activities can occur that result in: (1) eliminating the potential for unrestricted release, (2) significant environmental impacts not previously considered in EISs, and (3) there no longer being reasonable assurance that adequate funds will be available for

decommissioning. The basis for this final rule permitting the use of § 50.59 activities to perform decommissioning activities is that environmental impacts have already been considered and that such consideration was for an unrestricted release condition where the licensee has sufficient funds to complete decommissioning (see final generic environmental impact statement (FGEIS), NUREG-0586).⁽¹⁾ The major considerations of licensee decommissioning activities that could significantly affect the environment are at the license termination stage when the licensee submits a license termination plan for approval.

If a licensee contemplates decommissioning activities that would violate these requirements, the licensee may not use the § 50.59 process delineated in this rule to perform the activities. The licensee would then be required to obtain a license amendment to perform the activities.

The final rule prohibits licensees from performing any decommissioning activities that foreclose release of the site for possible unrestricted use, result in significant environmental impacts not previously reviewed, or result in there no longer being reasonable assurance that adequate funds will be available for decommissioning (§

⁽¹⁾ NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities," USNRC, August 1988. Copies are available for inspection or copying for a fee from the NRC Public Document Room 2120 L Street NW. (Lower Level), Washington, DC; the PDR's mailing address is Mail Stop LL-6, Washington, DC 20555-0001; telephone (202) 634-3273; fax (202) 634-3343.

50.82(a)(6)). Prior to the licensee's use of the § 50.59 process to perform major decommissioning activities, the PSDAR submittal and public information process must be completed. The licensee is required to include a discussion that provides the reasons for concluding that the environmental impacts that might occur during decommissioning activities have already been considered in site-specific or generic environmental impact statements, and to estimate the amount of funds necessary to complete decommissioning (see § 50.82(a)(4)).

The licensee is also required to submit a site-specific cost estimate within 2 years after permanent cessation of operations. Use of decommissioning trust funds are subject to the requirements (in § 50.82(a)(8)) that adequate funds will be available to ultimately release the site and terminate the license. Moreover, the final rule requires the licensee to notify the NRC in writing before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR and states that this notification include consideration of significant increases in decommissioning costs (§ 50.82(a)(7)).

The NRC intends to maintain an active inspection program to provide the requisite level of oversight of licensee activities during decommissioning. The PSDAR and any written notification of changes

required of a licensee will be used to schedule NRC inspection resources for significant decommissioning activities.

In addition to continuing requirements that the licensee must comply with, such as 10 CFR Part 20, regarding protection of workers and the public from radiation, and Appendix B to 10 CFR Part 50 regarding quality assurance, the final rule explicitly extends certain technical requirements to cover decommissioning activities (e.g., §§ 50.36, 50.36a, 50.36b, and Appendix I regarding technical specifications for surveillance requirements, administrative controls, control of effluents, and conditions to protect the environment). Thus, there will be a licensing basis appropriate to the activities undertaken using the § 50.59 process during decommissioning. By maintaining certain requirements throughout the decommissioning process, licensees will be able to use the existing § 50.59 process to perform decommissioning activities and thus provide comparable assurance that protection of the public health, safety, and the environment will not be compromised.

Issue 5 - Environmental Impact Considerations During the Initial Phase of Decommissioning.

Comments. Many commenters in favor of the rule fully supported the environmental impact considerations delineated in the proposed

rule for the PSDAR submittal, with no mandatory ER or subsequent EA requirement. A few commenters suggested that no environmental impacts for decommissioning need be addressed further because the FGEIS for the 1988 decommissioning rule (NUREG-0586, August 1988)¹ and subsequent environmental assessments (for various actual power reactor decommissioning situations) demonstrate that decontamination and dismantlement do not significantly affect the human environment and have beneficial effects in restoring the site to an environmentally acceptable condition. A few commenters suggested that decommissioning should be considered a categorical exclusion as defined in 10 CFR 51.22.

Most of the commenters who were not in favor of the rule believed that the NRC should define decommissioning as a major Federal action requiring an EA or EIS. They further indicated that a generic environmental impact statement cannot substitute for a site-specific EA because the FGEIS does not consider all possibilities. A few of these commenters further stated that the proposed environmental impact consideration process is NRC's attempt to streamline the process for utilities and deregulate NRC current requirements. A few commenters stated that the process outlined in the proposed rule abdicates NRC's responsibility to protect the health and safety of the workers, the public, the environment, and it also undermines citizen's due process.

Response. While the FGEIS (NUREG-0586)¹ for the 1988 decommissioning rule concluded that only minor negative environmental impacts would result from decommissioning in addition to substantial positive environmental impacts, it did not address site-specific situations that could differ from the assumptions used in the FGEIS analysis. However, it is expected that any site impacts will be minor. Any site impact should be bounded by the impacts evaluated by previous applicable GEISs as well as any site-specific EIS. To account for site-specific situations that may occur outside these environmental impact considerations, the final rule prohibits major decommissioning activities that could result in significant environmental impacts not previously reviewed. The approval process for the PSDAR and the license termination plan requires licensees to review the existing documents and address any discrepancies in their submissions.

The environmental assessment conducted for this rulemaking relied on the FGEIS for the decommissioning rule (NUREG-0586, August 1988)¹ and determined that, insofar as the rule would allow major decommissioning activities (dismantlement) to proceed without an environmental assessment, application of the rule will not have a significant impact on the environment. Although not required by NEPA, NRC has required in this final rule that licensees indicate in the PSDAR the reasons for concluding that the planned activities are

bounded by the FGEIS and previous site-specific environmental impact statements. This requirement is consistent with one of the primary goals of the PSDAR process, which is to promote public knowledge and provide an opportunity to hear public views on decommissioning activities before licensees commence decommissioning.

At the license termination stage, the Commission must make decisions on the licensee-proposed actions described in the license termination plan. The Commission must consider:

- (1) the licensee's plan for assuring that adequate funds will be available for final site release,
- (2) radiation release criteria for license termination, and
- (3) the adequacy of the final survey required to verify that these release criteria have been met.

Therefore, the NRC has determined that submittal of the license termination plan should be treated as a license amendment. In addition, under 10 CFR Part 51, an environmental assessment or impact statement would be required at the time the license is amended. Following resolution of another ongoing NRC rulemaking activity that is considering adoption of radiological release criteria, a categorical exclusion may be adopted that would eliminate the requirement for an environmental assessment or impact analysis, except in the case of a restricted release of a site.

Issue 6 - Public Participation.

Comment. Most commenters supporting the rule commented on the public participation aspects of the proposed rule. They believed that the participatory role given to the public was appropriate, excessive, or in need of further clarification. Several questioned the need for expanded public participation on matters of public health and safety because the NRC regulatory framework already provides for such participation (e.g., license amendment process). These commenters also noted that the purpose of the public meeting following the PSDAR submittal was not properly explained and that the final rule should clearly state that the meeting is intended for exchange of information only. Many commenters indicated that the NRC should limit the scope of these meetings and hearings to issues that are related to health and safety during the decommissioning process. These commenters also indicated that the supplementary information should include a clear statement of the purpose and participation guidelines for these meetings and clearly identify NRC's role at these meetings (which should be significant). A comment stated that it is essential that adequate mechanisms be developed for addressing issues of concern raised by members of the public and that, absent such closure, the meeting would only compound frustrations felt by the interested public. Finally, there was a comment that the 90-day waiting period

(after the submittal of the PSDAR to the NRC) before allowing licensees to undertake major decommissioning activities may not allow enough time for adequate public participation.

Most commenters who did not favor the rule believed that the public participatory role proposed was inadequate. These commenters stated that NRC should retain the possession-only license amendment (POLA) and decommissioning plan approval required in the current rule to truly enhance public participation. Public meetings were considered helpful, but no substitute for an adjudicatory hearing that includes the rights to discovery, to present evidence, and to cross examine. Along these lines, a commenter stated that a meeting does not afford citizens the level of institutional accountability necessary, given the dangers of environmental-toxic contamination inherent in reactor decommissioning activities and that citizens must have a substantive role in the decommissioning process in order to clarify, negotiate, and protect their community's interest. A few commenters suggested that site-specific advisory boards (SSABs) should be established early in the decommissioning process and that meaningful public involvement should be required at every stage of the decommissioning process, not only at the final termination stage.

Response. As discussed previously, initial decommissioning activities (dismantlement) are not significantly different from routine operational activities such as replacement or refurbishment.

Because of the framework of regulatory provisions embodied in the licensing basis for the facility, these activities do not present significant safety issues for which an NRC decision would be warranted. Therefore, it is appropriate that the licensee be permitted to conduct these activities without the need for a license amendment. However, the information meetings will be beneficial in keeping the public informed of the licensee's decommissioning activities. Although the primary purpose of these meetings is to inform the public of the licensee's planned activities, the NRC will consider public health and safety comments raised by the public during the 90-day period before the licensee undertakes decommissioning activities.

A more formal public participation process is appropriate at the termination stage of decommissioning because the final disposition of the site is determined at that time. Under the current rule, the Commission issues an order permitting the reactor to be decommissioned, based on the approved decommissioning plan, which amends the license. NRC administrative procedures, in Subpart G of 10 CFR Part 2, now provide an opportunity for persons to request a hearing regarding the NRC's decision. A similar procedure will be followed in the final rule for the license termination plan once the licensee has permanently removed fuel from the site. However, the hearing will be less formal because it will follow the procedures in

Subpart L of 10 CFR Part 2. The role of the SSABs will be evaluated when the rulemaking regarding radiological release criteria for license termination is finalized.

Issue 7 - Establishment and Use of the Decommissioning Trust Fund.

Most of the commenters on this issue were in favor of the rule. These commenters requested greater flexibility in what costs can be included in the fund, such as disposal costs of radioactive waste from plant operations, and greater flexibility in the use of the trust funds prior to and during decommissioning. Specific comments that reflect the full range of comments on financial issues are:

Comment a. The proposed § 50.82(a)(7) proposes to regulate a licensee's use of, and rate of withdrawal from, the decommissioning trust fund. While NRC oversight is warranted to ensure that decommissioning activities can be funded, regulating the rate of withdrawal from the trust fund may unnecessarily impede the efficiency of a licensee's decommissioning activities. Because the NRC's generic estimates of decommissioning costs are substantially lower than most recent site-specific cost estimates, licensees would be constrained to withdraw small fractions of an unrealistically low estimate.

Response. Limiting initial withdrawals to 23 percent of the generic cost estimate (using the § 50.75 requirements), until the licensee has submitted a site-specific decommissioning cost estimate, preserves the integrity of the decommissioning trust accounts. The final rule permits licensees to withdraw up to 3 percent of the generic formula amount for planning at any time during the decommissioning planning process, including planning that occurs while a plant is still operating. This amount should be ample based on current planning costs for licensees recently undergoing decommissioning. Likewise, allowing withdrawals of 20 percent of the generic amount for decommissioning activities would allow funding of certain activities before receipt of a site-specific cost estimate. This amount is consistent with costs of large component removal activities undertaken or contemplated by licensees of shutdown plants (e.g., Yankee-Rowe and Trojan). Once the NRC has received the site-specific decommissioning cost estimate, a licensee would have access to the balance of trust fund monies for the remaining decommissioning activities. Because the timing of the submittal of a site-specific cost estimate is within the control of the licensee, the Commission believes that unwarranted restraints on access to funds are not imposed by the final rule.

Comment b. The scope of decommissioning-related activities that licensees may collect funds for should include disposal of low-level waste generated during operations, maintenance and storage of spent fuel after cessation of operations, costs to maintain an independent spent fuel storage installation, and non-radioactive demolition or "greenfield." State Public Service Commissions and the Federal Energy Regulatory Commission have authorized funding for these activities in some cases because it is in the best interests of the utilities' customers. The NRC regulation should not require segregation of these funds in separate accounts; restrictions on the withdrawal of trust funds in the proposed rule could lead utilities to create separate trust accounts for each nuclear facility funding component (e.g., decommissioning, spent fuel management, and greenfield). Finally, the rule should allow for the prudent and economic use, at the utility's discretion, of decommissioning trust funds during the years of normal plant operation even before end of life.

Response. The NRC's authority is limited to assuring that licensees adequately decommission their facilities with respect to cleanup and removal of radioactive material prior to license termination. Radiological activities that go beyond the scope of decommissioning, as defined in § 50.2, such as waste generated during operations or demolition costs for "greenfield" restoration, are not appropriate costs for inclusion in the decommissioning cost estimate.

Funds for interim spent fuel storage and maintenance are addressed in § 50.54(bb).

The final rule does not prohibit licensees from having separate sub-accounts for other activities in the decommissioning trust fund if minimum amounts specified in the rule are maintained for radiological decommissioning.

Comment c. Section 50.82(a)(7)(ii) of the proposed rule specifies that a site-specific decommissioning cost estimate must be submitted to the NRC prior to the licensee being permitted to use any funding in excess of previously stipulated amounts. This could be interpreted to mean that the NRC must approve the additional expenditures. If this paragraph is retained, the intent of this "permitting" should be made clear. Expenditures made in accordance with the PSDAR and the decommissioning cost estimate should not require any additional NRC authorization.

Response. The NRC's intent in the proposed rule was not to use a formal approval mechanism for decommissioning expenditures once the licensee submits its site-specific decommissioning cost estimate. The final rule has been modified as suggested by the commenter.

Comment d. More guidance should be provided regarding what constitutes a decommissioning "planning" expenditure. Changes in the proposed rule regarding expenditure of funds from the NRC Draft Policy

Statement on use of decommissioning funds before decommissioning plan approval (59 FR 5216; February 3, 1994), should be more fully explained.

Response. The term "planning" used in § 50.82(a)(8)(ii) specifically means "paper" studies, not equipment removal. Percentages are used in the final rule rather than specific dollar amounts, as used in the Draft Policy Statement, to better allow for inflation of costs in the future. Other changes to the Draft Policy Statement are based on the response to comments, developed prior to this rulemaking activity, and presented in the section on the "Resolution of Comments on the Draft Policy Statement."

Comment e. If a plant shuts down early, not only will there be insufficient funds to pay for planned decommissioning (because not all payments will have been made), but the actual cost of decommissioning can be 2 to 3 times higher than planned. The NRC should require external funds in the amount necessary to complete decommissioning upfront. Moreover, the NRC does not have a procedure in place for "replacing" a reactor licensee that goes bankrupt. Finally, the NRC should specifically allow the total financial approach to be made along the lines of industry self-insurance.

Response. The revised regulations preserve the integrity of the decommissioning funds by tying the rate of expenditure to specific

parts of the decommissioning process. At the same time they allow broad flexibility once a licensee submits its site-specific decommissioning cost estimate.

The issue of bankruptcy, as well as the requirement for power reactor licensees to have the total amount of decommissioning funds upfront, was considered during the development of the current rule and found to be adequately addressed in current requirements. Bankruptcy does not necessarily mean that a power reactor licensee will liquidate. To date, the NRC's experience with bankrupt power reactor licensees has been that they file under Chapter 11 of the Bankruptcy Code for reorganization, not liquidation (e.g., Public Service Company of New Hampshire, El Paso Electric Company, and Cajun Electric Cooperative). In these cases, bankrupt licensees have continued to provide adequate funds for safe operation and decommissioning, even as bondholders and stockholders suffered losses that were often severe. Because electric utilities typically provide an essential service in an exclusive franchise area, the NRC staff believes that, even in the unlikely case of a power reactor licensee liquidating, its service territory and obligations, including those for decommissioning, would revert to another entity without direct NRC intervention. However, the NRC believes that with electric utility deregulation becoming more likely, it may need to require additional decommissioning funding assurance for those licensees that are no longer able to collect full

decommissioning costs in rates or set their own rates. Thus, the NRC proposed a rulemaking plan to, in part, evaluate these developments in SECY-95-223 (September 1, 1995).

Issue 8 - Court decision.

Comment. Most commenters who were in favor of the rule indicated that the proposed rule did not conflict with the recent court decision regarding the Yankee Rowe decommissioning (Citizens Awareness Network, Inc. v. NRC, 59 F.3d 284 (1st Cir. 1995)). Most of the commenters who were not in favor of the rule believed that the proposed rule violated the court's decision, or the spirit of the decision, regarding Yankee Rowe.

Response. A significant basis for the court's decision was that it perceived that the Commission had not adequately provided the reasoning for the NRC decision to allow decommissioning activities before NRC approval of a licensee-submitted decommissioning plan (59 F.3d at 291-292), a decision that the court considered to be a modification of the Commission's decommissioning regulations. The court noted that the Commission had failed to provide either a rulemaking proceeding or a hearing to address what the court perceived to be NRC approvals of licensee decommissioning activities (59 F.3d at 291-92, 294-95). By initiation of a notice of proposed rulemaking and

solicitation of comment (July 20, 1995; 60 FR 37374), the Commission addressed the reasoning underlying the proposed decommissioning process and allowed public review and comment on that reasoning.

The final rule includes a public notice and meeting process, prompted by the licensee's submission of a report describing planned decommissioning activities, to hear public views before the licensee undertakes major decommissioning activities. This process specifically provides that licensees may not begin major decommissioning activities until after they have submitted a PSDAR. The PSDAR will be made available to the public for written comment and a public meeting will be held to hear public views. Finally, the licensee is required to submit a license termination plan before release of the site. The final rule specifies that the license termination plan be approved by the NRC through the license amendment process. This process provides the public with hearing opportunities and ensures that any hearing on that plan must be completed prior to release of the site. This procedural framework assures that those citizens living near the site, potentially for years or decades after the facility is shut down, will be provided with information regarding the licensee's planned decommissioning activities, have an opportunity to ask questions regarding those activities at a public meeting early in the process, and have timely input into the decision to release the site.

In its decision, the court also specifically addressed a concern about decommissioning activities taking place prior to any NEPA analysis (59 F.3d at 292-93). The final rule addresses this issue in several respects. First, the final rule explicitly prohibits the licensee from performing any major decommissioning activity that results in significant environmental impacts not previously reviewed or forecloses possible unrestricted release of the site.

Also, when the licensee submits the PSDAR, the licensee must specifically include a section discussing how the planned activities fit within the envelope of environmental effects included in either the FGEIS (NUREG-0586, August 1988)¹ or the facility's site-specific environmental impact statement. Moreover, the licensee must provide written notification if the intended decommissioning activities are inconsistent with the PSDAR. This requirement helps ensure that, after submittal and public comment on the PSDAR, any changes to the planned decommissioning activities continue to be enveloped by the assessment of environmental impacts in prior environmental reviews. Any activities not meeting the environmental criteria would require the licensee to file an application for amendment to the license and a supplement to its environmental report under 10 CFR Part 51. Finally, the rule requires a formal license termination plan by the licensee. The plan must be approved by the NRC by a license amendment that follows NRC procedures for amendments, including applicable hearing

rights (under either Subpart L or Subpart G of 10 CFR Part 2, as specified in the rule) and the preparation of environmental assessments.

The court perceived that the agency "approval" of the expenditure of funds from the decommissioning funds may be a basis for triggering both NEPA reviews and hearing rights (59 F3d at 292-95). The final rule addresses this issue by providing generic guidance as to what expenditures can be made out of the decommissioning fund for decommissioning activities before submittal of a site-specific cost estimate. The revised regulation use generic criteria for expenditures from the decommissioning funds and do not require prior NRC approval of site-specific expenditures meeting the generic criteria (see § 50.82(a)(7)). These new provisions specifically require licensees to maintain sufficient funds for release of the site and termination of the license. The licensee will have to also include an updated, site-specific analysis of remaining costs in the license termination plan submittal.

In publishing this final rule, the Commission has explained the rationale for the new decommissioning process, and has concluded that nothing in the court decision dictates that the Commission take a specific approach to this issue or otherwise raises questions concerning the validity of the approach adopted in this rulemaking.

Issue 9 - Definitions.

Comment. Regarding the definitions in § 50.2, a few commenters indicated that the definition of decommissioning should include the concept of restricted release to accommodate the proposed rulemaking on acceptable residual radioactive criteria for decommissioning. Several commenters noted that the definitions of "major radioactive components" and "major decommissioning activities" were unnecessary because the use of the existing § 50.59 process does not require these considerations and is adequate to deal with decommissioning activities. However, if a definition of "major radioactive components" must be kept, the definition should only be relevant to any components, that when dismantled for shipment, contain greater than class C waste. During decommissioning activities, these waste disposals have the greatest significance regarding environmental impacts and adequate funding and are unrelated to the physical size of components.

Response. When the residual radiation criteria rule is final, the definition of decommissioning in § 50.2 will address use of the restricted release. It is necessary to have definitions of "major radioactive components" and "major decommissioning activities" to clarify what decommissioning activities may not occur before the end

of the 90-day waiting period. However, the definition of "major radioactive components" in the final rule has been clarified to clarify that large components, other than those named, are not prohibited § 50.59 activities if they contain small amounts of radioactivity. Dismantlement of these components is considered part of routine operating nuclear power reactor activities.

Issue 10 - Modifications to Specific Technical Requirements.

Comment. Most of the commenters addressing this issue were in favor of the rule and indicated that there should be additional elimination or modification of requirements beyond those presented in the proposed rule. There was a spectrum of views on this issue: if a risk analysis were performed, it would demonstrate that the proposed rule would impose unnecessary burden on NRC licensees and NRC resources without commensurate benefit to health and safety; appropriate technical specifications for decommissioning would be for those activities for which there is a significant hazard; the final rule should include a discussion of the logic (i.e., philosophy) in making conforming revisions to Part 50, especially with respect to provisions that did not change (e.g., §§ 50.55a, 50.63, 50.72, and 50.73 applicability); the study and survey by the NRC concerning additional amendments for non-applicability should be completed before

this rule is finalized (one commenter); and that the proposed rule appears geared to permanently shut down reactors with fuel onsite and does not differentiate among the aspects that apply once fuel is removed from the site, and the rule should consider such situations. Finally, one commenter requested that environmental qualifications remain in place for equipment important to safety pertaining to spent fuel management and storage.

Response. This rulemaking is primarily directed toward the procedural process for decommissioning, with particular emphasis on premature closure situations. The modifications to technical requirements in the final rule are based on a consequence analysis that either leads to elimination of the requirement or extends its applicability to decommissioning.

The modifications to the technical requirements in the final rule are incomplete, as noted in the proposed rule, and as the information base continues to develop, additional rulemaking actions to modify other requirements will be conducted. In the interim, licensees that no longer have fuel onsite may continue to request exemption for specific requirements on a case-by-case basis. The information base will address the storage of high-density packaging of hot spent fuel in the spent fuel pool with special consideration given to potential radiological consequences that could occur from loss of coolant in the pool. Consideration for amending rule requirements is also being

given to situations in which the fuel is in dry storage at an Independent Spent Fuel Storage Installation (ISFSI).

Comments on specific amendments were:

Comment: Part 26. The final rule should explicitly state that the fitness for duty program does not apply to a permanently shut down and defueled facility. If it must apply, then it should apply to persons with unescorted access to the fuel storage building or buildings containing equipment necessary for the safe storage and handling of spent fuel.

Response. Until further analysis is completed regarding risks associated with the presence of spent fuel onsite, Part 26 continues to apply.

Comment: Section 50.36. Criteria are needed to ensure that technical specifications are appropriate for the conditions of a plant in a defueled state. The four criteria specified in § 50.59(e) would be appropriate additional guidance.

Response. Consideration will be given at a later time to the development of additional guidance in the form of standardized technical specifications for decommissioning. However, licensees may

apply for modification of their technical specifications on a case-by-case basis.

Comment: Section 50.36(c)(6) and (e). These requirements, which appear to imply that a new set of technical specifications will be developed for the plant decommissioning phase, are redundant and should be eliminated because § 50.51(b)(2), the requirement to conduct activities in accordance with the specific Part 50 license for the facility, is sufficient to ensure effectiveness of the technical specifications.

Response. As a reactor facility transitions from operational to decommissioning status, numerous changes to technical specifications are expected. The regulatory experience with revisions to the technical specifications during this transition period has entailed case-specific evaluations of individual licensee requests. This has resulted in some inconsistency and variability of expectations among shutdown reactor facility license requirements. This revision provides the basis for developing a consistent framework for the development of "standardized technical specifications for decommissioning," as well as addresses the uncertainty regarding the applicability of the existing regulation to permanently shutdown reactors. Section 50.51 specifically addresses the continued effectiveness of expired licenses and limitation of licensee actions

during any continued effectiveness period. As such, § 50.51 does not, nor is it intended to, provide specific license conditions and requirements. Section 50.36 addresses this issue.

Comment: Section 50.36a(a)(1). This requirement should be clarified and revised because radioactive waste systems will have to be removed prior to license termination, and the present wording appears to require that these systems be used and maintained. Moreover, temporary systems are typically used for effluent treatment and the rule should be modified to describe only those systems that are appropriate.

Response. Section 50.36a(a)(1) is intended to ensure that operating procedures for any waste treatment systems used to control effluents be maintained and used to existing release criteria, and not that the systems be used and maintained when no longer necessary. However, in response to the comment, § 50.36a(a)(1) has been modified from the proposed rule so that systems that are no longer necessary can be eliminated from compliance requirements.

Comment: Section 50.47. A defueled plant that has ceased operation warrants a material reduction in the scope of its offsite emergency planning requirements because the credibility of any offsite consequences are reduced. Beyond the spent fuel pool, there is not

sufficient source term to justify emergency plans. This also pertains to Appendix E to Part 50 and the requirements in § 50.54(t) concerning periodic review (frequency and scope) of the licensee's emergency preparedness program.

Response. Consideration of the potential radiological consequences of hot, high-density packaged fuel in the spent fuel pool is still ongoing. Modifications to this requirement, if made, will be developed at a later time.

Comment: Section 50.48. While some commenters agreed with the concept of a fire protection plan through the end of decommissioning, one found the proposed language overly restrictive, vague, and ambiguous. This commenter stated that once the permanently removed spent fuel is certified to no longer be a fire protection concern, an industrial fire protection program could be adequate in most cases. Several other commenters noted that there are other ongoing NRC activities to improve current fire protection regulations, and if actions are taken now, they should only be based on "significant hazards" considerations.

Response. These modified requirements have been coordinated with ongoing NRC activities regarding the improvement of fire protection regulations. Also, see the response to § 50.47 regarding spent fuel considerations. As presently configured, fire protection regulations apply only to operating reactor facilities. The need for an ongoing

fire protection program, albeit a modified one, remains after the facility has ceased reactor operations. The final rule provides a performance-based program that can readily be modified during the decommissioning process to address residual hazards.

Comment: Section 50.49. Electric equipment required for protection of spent fuel outside the reactor does not meet the definition of equipment defined by § 50.49(b). The discussion in the final rule should be corrected to note that the environmental qualifications regulations apply to selected safety and non-safety related equipment as described in § 50.49(b).

Response. No modifications to the proposed rule are necessary. However, the environmental qualifications regulations apply to selected safety and non-safety related equipment as described in § 50.49(b).

Comment : Section 50.51. Section 50.51(b) should be deleted because it is redundant. If it is kept, the requirements on the continuation of a license should be clarified to affirm that other operating reactors would be unaffected when the operating license of one reactor has been terminated at a multi-reactor site. Section 50.51(b)(1) should be clarified to indicate that, at sites that have an intervening reuse but do not require decontamination to

unrestricted release, decontamination would not need to occur until the end of the reuse period.

Response. Section 50.51(b) is not redundant and will not be deleted. This section in the final rule has been modified to clarify that an expired license for a nuclear reactor facility that has permanently ceased operations is not terminated until the Commission terminates it. This provision further clarifies what conditions prevail under such circumstances. At a multi-reactor site, each reactor is individually licensed and actions are applied accordingly. The final rule addressing the radiological criteria for decommissioning will address the issue of restricted release options. Under the proposed rule, such restrictions would have to ensure that members of the public, in the event the restrictions fail, would not receive a dose in excess of 100 mrem per year. Unless the facility remained under license, individuals having access to the facility would be considered members of the public.

Comment: Section 50.54(g). The anti-trust law requirements for a reactor that has permanently ceased operations and permanently defueled should be reevaluated for applicability.

Response. Section 50.54(g) simply provides that the issuance of an NRC license does not relieve the licensee from compliance with the anti-trust laws specified in Section 105 of the Atomic Energy Act, and

that the NRC may take appropriate action, including suspension or revocation of the license, if a court finds the licensee to have violated any provisions of such anti-trust laws. This subsection of the regulation is sufficiently flexible that there is no reason to modify or delete it with respect to a facility that has ceased operations or is permanently defueled.

Comment: Paragraphs (k), (l), and (m) of § 50.54. The requirement for licensed operators should be eliminated or reduced because reactivity changes can only occur during the initial stages of decommissioning in connection with repositioning fuel assemblies in the spent fuel pool. With reference to § 50.54(i), the scope of the operator requalification program and limitations on a licensee's freedom to modify it should be reduced at facilities undergoing decommissioning.

Response. Consideration of these issues is ongoing and may result in future rulemaking.

Comment: Section 50.54(w). Onsite property damage insurance for a facility undergoing decommissioning should be eliminated or substantially modified.

Response. Consideration of the potential radiological consequences of hot, high-density packaged fuel in the spent fuel pool

is still ongoing. Modifications to this requirement, if made, will be developed at a later time.

Comment: Section 50.55a. Pertaining to codes and standards requirements, it should be noted that §§ 50.55a(a), (f), and (g), inservice testing requirements, do not apply to permanently defueled reactors because the plant is not operating and there is no need to apply the regulation.

Response. No change is necessary because these requirements provide assurance that relevant portions of the facility are maintained functional or operational to adequate standards so they are operationally capable.

Comment: Section 50.63. The requirements on the loss of all ac power should not apply to decommissioning because the potential for significant radiological consequences is very low (there is a low probability of incident and long recovery time).

Response. Consideration of the potential radiological consequences of hot, high-density packaged fuel in the spent fuel pool is still ongoing. Modifications to this requirement, if made, will be developed at a later time, as will include considerations of fuel stored in an ISFSI.

Comment: Section 50.65. Monitoring maintenance for a permanently shutdown and defueled facility on any of its structures, systems, or components (SSC) to levels required by the current maintenance rule is unnecessary. Permanently shutdown and defueled facilities can no longer experience the levels of mechanical stresses associated with an operating plant. Therefore, the industry interprets the proposed rule to mean that the maintenance program only applies to the safe storage of fuel. The relative risks from a shutdown plant allow requirements in existing technical specifications and other administrative programs to provide adequate assurance for safe fuel storage.

Response. The maintenance rule, § 50.65, requires that the performance or condition of all structures, systems, and components (SSCs) described in § 50.65(b) be included in the scope of the rule. Under the current rule, licensees are permitted flexibility in the goals that are established and the monitoring that is performed for these SSCs. However, that flexibility does not include the elimination of goal setting and monitoring or any other requirement of the rule. The NRC agrees that the stresses on most SSCs in an operating plant are greater than those associated with a shutdown and defueled plant. The final rule allows the scope to be limited to those SSCs associated with the storage, control, and maintenance of spent fuel in a safe condition in a manner that provides reasonable

assurance that the SSCs are capable of performing their intended function.

Comment: Section 50.72. The immediate notification requirements for operating nuclear power reactors should not apply to permanently defueled reactors or, if applicable, should be significantly modified. Regarding § 50.72(a)(i), there should be no requirement to use the Emergency Notification System or Emergency Response Data Systems.

Response. The NRC did not adopt this comment. Notification requirements for events such as abnormal releases and overexposures are examples of required reports that are necessary.

Comment: Section 50.111. Criminal penalties should not be imposed for decommissioning activities because they are not so important to public health and safety that licensees need be subject to them. Decommissioning activities for reactor licensees should not be treated any differently than for other radioactive material licensees.

Response. The Commission believes that certain actions are essential in initiating the decommissioning process (e.g., certifying to permanent cessation of operation and permanent removal of fuel from the reactor vessel, and submitting a PSDAR) and should, therefore, be treated as substantive with respect to the criminal penalty provisions

of the Atomic Energy Act. Decommissioning actions, when initiated improperly, have a potential for significant consequences regarding health, safety, and the environment. Willful violations of, attempted violations of, or conspiracy to violate, § 50.82 would, therefore, be a matter of significant concern to the NRC. Thus, the NRC is retaining the addition of § 50.82 to the list of regulations to which criminal sanctions apply.

Comment: Section 140.11. Concerning Price Anderson financial protection, permanently shutdown and defueled facility licensees should be permitted to withdraw from the secondary financial protection layer, and single units should be given a reduction in the primary level of coverage (e.g., \$100,000,000).

Response. Consideration of the potential radiological consequences of hot, high-density packaged fuel in the spent fuel pool is still ongoing. Modifications to this requirement, if made, will be developed at a later time, as will considerations of fuel stored in an ISFSI.

Issue 10 - Termination of License Requirements.

Most of the commenters in favor of the rule supported the decommissioning requirements for termination of the license in the

proposed rule. However, several of these commenters stated that approval of the license termination plan should not require an amendment or opportunity for a hearing. They believe that if the plan is made available for public comment, existing regulations provide ample opportunity for public participation and the AEA does not require a hearing. Another commenter noted that once the spent fuel is off the site, the hazard is reduced so there is no safety, technical, or legal basis for NRC approval of a detailed decommissioning plan or PSDAR. A commenter pointed out that the use of the proposed § 50.59, which includes the four criteria (§ 50.59(e)), addresses the unique circumstances associated with the decommissioning activities. If some activities do not satisfy the requirements of § 50.59 and a license amendment is required, interested parties would have an opportunity to request a hearing. The approval of the plan by amendment and the opportunity for a hearing are not for reasons of health and safety; moreover, any interested party could always petition for a hearing under § 2.206. Another commenter made similar comments and went even further in stating that if standards for radioactive release are clear, meeting the objective of terminating the license should be easily demonstrated without the need for approval of a plan or license amendment; and that the plan should be available to the NRC for information only.

Response. The requirement for submittal of a termination plan is retained in the final rule because the NRC must make decisions, required in the current rule on the decommissioning plan, regarding (1) the licensee's plan for assuring that adequate funds will be available for final site release; (2) radiation release criteria for license termination, and (3) adequacy of the final survey required to verify that these release criteria have been met. A public meeting is considered necessary at the license termination stage to inform the public about the licensee's proposed termination activities and to provide an opportunity for public comment on those proposed activities. The NRC has also made the determination that license termination is an action of sufficient significance as to warrant an opportunity for a public hearing on NRC's decision regarding the licensee's proposed termination activities.

Specific comments concerning the license termination plan were provided by several commenters.

Comment a. The timing of the license termination plan is not explicit in the proposed rule, § 50.82(a)(8), and it is not clear whether the rule permits dismantlement activities before submittal or approval of the license termination plan.

Response. The final rule permits dismantlement activities 90 days after PSDAR submittal unless the NRC interposes an objection. The license termination plan must be submitted within 2 years of the licensee's expected date of license termination (the date specified in the PSDAR or supplement).

Comment b. The NRC does not explain or support the need for the elements of the plan, discussed in proposed § 50.82(a)(8)(ii)(A)-(G). The current rule, under § 50.82(d), simply requires updated, detailed plans before the start of decommissioning.

Response. The final rule permits major decommissioning activities (dismantlement) to be performed using the § 50.59 process. Because a decommissioning plan is no longer required, the requirements for the license termination plan are less complex than those that are currently required for a decommissioning plan. The license termination plan provides documentation on the remaining activities necessary to terminate the license and includes consideration of remediation aspects that could involve license termination under either unrestricted or restricted release conditions (once the rulemaking on acceptable residual release criteria is final). The site characterization, description of the remaining dismantlement activities and plans for site remediation are necessary for the NRC to be sure that the licensee will have adequate funds to complete

decommissioning and that the appropriate actions will be completed by the licensee to ensure that the public health and safety will be protected.

Comment c. One commenter questioned how multiple sites will be addressed. Another commenter stated that a single license termination plan should be encouraged for multi-reactor sites.

Response. Reactors at a multi-reactor site are individually licensed and licensing actions are applied to the individual licenses. A licensee would not be prohibited from submitting a single license termination plan for the multi-reactor site, but the NRC would address terminating each license separately.

Issue 11 - License Termination: Additional comments.

Comment. A commenter stated that the need for a hearing when the licensee submits the license termination plan for approval should be reconsidered. If the licensee meets the requirements of the termination plan and applicable regulations, there would be no issues to adjudicate. Another commenter stated that, concerning the Subpart L proceedings, the NRC should issue a clear statement of policy to eliminate the potential for significant litigation. Several commenters stated that if Subpart L is to be used for hearings, it

appears necessary to change the title of Subpart L to include Part 50 licensees. Finally, a commenter stated that the applicability of Subpart L hearings should be incorporated into § 2.700 as well as § 2.1201.

Response. With respect to the termination plan, the Commission recognizes that ongoing rulemaking proceedings may result in establishing criteria for the restricted release of sites. Even if a hearing is not legally mandated at the termination stage as argued by some commenters, the Commission views it as appropriate to use the amendment process for approval of termination plans, including the associated opportunity for a hearing, to allow public participation on the specific actions required for license termination. In particular, the Commission has determined that, if a hearing is requested on the termination plan, the hearing must be completed before release of the site. This action will help ensure meaningful public input on any proposal for restricted release of the site. Given that a lengthy period (up to 60 years) may pass between the PSDAR stage and the termination stage, and given that final release criteria are still being developed that may include restricted release of a site, the Commission views a license amendment process as appropriate, along with the associated opportunity for a hearing, whether or not such hearings are mandated by legislation. Finally, the changes proposed by the commenters concerning the change of title of Subpart L to

include Part 50 licensees and the incorporation of Subpart L applicability into §§ 2.700 and 2.1201 are unnecessary because the rule already addresses these considerations.

Comment. Many commenters expressed confusion on when a Subpart L or Subpart G hearing would be appropriate. One commenter noted that once fuel is out of the reactor vessel and in dry storage, there is no difference between storage on or off site and that reference to the Subpart G hearing should be deleted. Another commenter wanted a clarification of what is meant by removing fuel from the site (i.e., under a Part 72 license). Another commenter suggested that the wording to § 2.1201(a)(3) be clarified concerning permanent removal of fuel from the site to an authorized facility. One commenter inquired as to whether a license could be terminated if the licensee removed the fuel to an onsite ISFSI.

Response. The final rule clearly indicates that once the fuel is removed from the licensed Part 50 facility the power reactor facility can be treated as a materials facility where a Subpart L hearing is appropriate. If fuel remains at the facility, a Subpart G hearing is appropriate. If the fuel is in an ISFSI, that part of the affected site is regulated under a Part 72 license and would no longer be regulated under the Part 50 license. The wording in § 2.1201(a)(3) has been changed to "removal of fuel from the Part 50 facility,"

rather than "from the site," and means either removal offsite to an authorized facility or to an onsite facility (ISFSI) not under the Part 50 license.

Comment. Many commenters did not see the need for an environmental review at the license termination stage, and one suggested that it be considered a categorical exclusion. Another commenter stated that if there were to be an environmental review, its scope should be restricted to whether the licensee's controls and methods for mitigation of radiation will meet the standards adopted in § 20.1405 of the proposed residual radiation criteria rule.

Response. At the license termination stage, an environmental assessment or impact statement will be required when the license is amended. Following resolution of another ongoing NRC rulemaking activity that is considering adoption of radiological release criteria, a categorical exclusion may be adopted that would eliminate the requirement for an environmental assessment or impact analysis, except in the case of a restricted release of a site.

Comment. A few comments addressed proposed changes to § 51.53 concerning requirements for environmental impact considerations. One commenter stated that the first sentence of the first paragraph of § 51.53(b) should be deleted to be consistent with the concept that "a

License amendment authorizing decommissioning activities" is no longer required. Revised wording should begin with "each applicant for a license amendment approving a license termination plan or decommissioning plan." Another commenter stated that § 51.53 should be revised to reflect the fact that the proposed rule, if adopted, would not require an amendment that authorizes the conduct of decommissioning activities, because neither the existing nor the proposed decommissioning process requires a license amendment to approve a decommissioning plan. Therefore the first paragraph of this section should be reworded as "[E]ach applicant for license termination upon submittal of the license termination plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site, ... shall submit ..." A similar change was stated to be needed in § 51.95 for the same reasons. Finally, a commenter noted that § 51.53(b) as well as § 51.95(b) refer to "applicants ... for a utilization facility," which does not seem to be an element of the proposed rule and should be deleted; also, § 51.95(b) does not mention approval of a license amendment for license termination or a decommissioning plan, which is an omission and should be consistent with § 51.53(b).

Response. No change was made to this section because the non-power reactor facilities are still required to submit a decommissioning plan. For non-power reactors, the current rule

remains essentially unchanged and requires submittal of a decommissioning plan that is approved through license amendment. The non-power reactor licensee must also submit an appropriate supplemental environmental report and the NRC must do an EA as part of the decommissioning plan approval process.

Comment. Most of the commenters who were not in favor of the rule supported the license termination phase requirements but believe that these requirements were not timely and should be implemented in some manner at the initiation phase of decommissioning.

Response. During the initial phase of decommissioning, the requirements in the final rule are designed to provide oversight comparable to the existing rule, while providing additional opportunity for public comment on the licensee's proposed activities. The final rule requirements are based on NRC's experience with licensees' use of the § 50.59 process during operations and consideration of the types of activities that licensees would undertake during the decommissioning process. Where appropriate, licensing requirements are continued through decommissioning and the NRC is informed of each licensee's planned decommissioning activities. (Additional discussion can be found in the response to Comment 5).

Issue 12 - Regulatory Guides.

Comment. Several commenters requested regulatory guidance in the form of regulatory guides. These requests pertained to a standard format and content for the PSDAR and license termination plan as well as to transition guidance for licensees who are shut down and choose to adopt the new process. Additional guidance was also requested for a regulatory guide that dealt with the decommissioning process, such as a revision to Regulatory Guide 1.86, "Termination of Operating Licenses for Nuclear Reactors," that would include such topics as the objective and implementation aspects of public meeting and hearings, guidance on issues the NRC would consider in not giving negative consent approval to the PSDAR after the 90-day waiting period, guidance on interpretation and development of technical rule requirements, and guidance, on the particulars of "grandfathering." Additionally, several commenters requested additional financial guidance, through a regulatory guide, on the development and use of the decommissioning trust fund.

Response. The NRC intends to issue regulatory guidance on the initial phase of decommissioning. Guidance on the standard format and content of the PSDAR will be issued after the final rule is published. Other guidance on the license termination phase is also being developed.

Issue 13 - Elimination of the Possession-only License Amendment (POLA).

Comment. Generally, commenters in favor of the rule agreed with eliminating the POLA. Objections to POLA elimination from other commenters were that distinct categories between reactor operation and cessation of operation should be maintained and that eliminating the POLA process would eliminate a hearing opportunity prior to reactor decommissioning. Reflecting the views of many commenters against POLA elimination, a State commenter said that by deleting the POLA the NRC would eliminate the amendment process that expressly provides for State consultation (§ 50.91(b)) and that no Subpart G hearing process would occur that would allow for discovery by parties to the proceeding and provide a mechanism for intervention. The State commenter held that the proposed rule delays the need for amendment to the license termination stage when it is too late; it is needed before major decommissioning activities are undertaken. Moreover, at the license termination stage, only a Subpart L hearing is proposed (no discovery). Finally, a few commenters asked why non-power reactors, which are less hazardous facilities (smaller and less contaminated), can still request a POLA and still require decommissioning plan

approval while power reactors no longer have this option or requirement.

Response. If fuel is removed from the licensed Part 50 facility, the activities undertaken during decommissioning are more like the kinds of activities undertaken at a typical materials facility where the Subpart L process applies. The final rule requires that certain procedures be satisfied before a licensee can perform major decommissioning activities. These procedures include requiring a PSDAR submittal, conducting a public meeting, and allowing a specified time period for NRC review of the licensee's intended actions. Other final rule requirements prohibit the licensee from performing any major decommissioning activity that could result in significant environmental impacts not previously reviewed or foreclose the release of the site for unrestricted use. Written notification to the NRC is required for licensee decommissioning activities that are inconsistent with those described in the PSDAR, including significant changes in decommissioning costs. Finally, the final rule extends certain regulatory requirements to decommissioning. Thus, licensee activities that would require approval under a POLA are no longer necessary. The affected State(s) will be notified about the public information meeting as well as consulted on the licensee's planned decommissioning activities by the NRC prior to the public meeting. The final rule requires that a copy of the PSDAR and any written notification of

inconsistent PSDAR activities be sent to the affected State(s). In response to the comment concerning why non-power reactors are still given the option of submitting a POLA and still require a decommissioning plan, it is noted that such reactors are required to immediately dismantle, except for extenuating circumstances, and are not permitted a storage period (because there is no significant health, safety or environmental reason for delay - see FGEIS, NUREG 0586)¹.

Issue 14 - "Grandfathering" Considerations.

Comment. There were several commenters who were concerned that the proposed rule did not significantly address nor provide necessary guidance for "grandfathering" issues. Specific comments in this area were that recognition should be given to those plants whose decommissioning plans have been approved on a case-by-case basis; that if existing facilities are grandfathered from any part of the proposed rule, it should clearly identify this; that the proposed rule does not adequately implement the grandfathering option because the current § 50.82 would disappear from the rule and no explicit provisions would exist to rely on. It is suggested that the NRC keep the old provision as well as an applicable alternative and; that for grandfathering, an implementation provision should be added to the rule in a fashion

similar to § 20.1008. Several commenters also noted that guidance needs to be given to those licensees who are in various aspects of decommissioning based on the current rule requirements and wish to switch to the proposed rule requirements.

Response. The Commission has reconsidered the issue of "grandfathering" and modified the language in the final rule to provide more specific guidance for nuclear power reactor licensees whose facilities are currently at certain stages of decommissioning. The Commission has decided to eliminate the provision in the proposed rule that would give those licensees that have an NRC approved decommissioning plan, before the date when a final rule became effective, the option of either complying with the final rule requirements or continuing with the requirements of the currently existing rule. All licensees will be required to comply with the decommissioning procedures specified in the provisions of the final rule, when it becomes effective. The final rule addresses the process for converting from the existing rule requirements to those in the final rule for those nuclear power reactor licensees whose facilities are already at certain stages of decommissioning.

For power reactor licensees who, before the effective date of this final rule, either submitted a decommissioning plan for approval or possess an approved plan, the plan will be considered as the PSDAR submittal and the licensee will be required to perform decommissioning

in conformance with these final rule requirements. However, for power reactor licensees who are involved in Subpart G hearings of 10 CFR Part 2, conversion to the new rule will not be permitted until the hearing process is completed. The public meeting and 90-day hold on decommissioning activities required in § 50.82(a)(4)(ii) and (5) will not apply. Those licensees will be subject to any orders arising from these Subpart G hearings, absent any orders from the Commission.

For nuclear power reactor facility licensees whose licenses have been modified, before the effective date of this rule, to allow possession but not operation of the facility, the certifications required in § 50.82(a)(1) will be considered to have been submitted.

With regard to extending current rule requirements for "grandfathering" considerations, no current rule requirements need be retained because the "grandfathering" provision in the proposed rule has been eliminated in the final rule. The final rule covers conversion from the existing requirements for approval of a submitted or approved decommissioning plan, as described above, and is specific to existing licensee decommissioning plan situations.

Issue 15 - Miscellaneous Comments.

Comment. Several commenters stated that the backfit rule, § 50.109, should apply to decommissioning because a proper reading of the intent of that rule should cover rulemaking dealing with decommissioning. Otherwise, additional requirements could be imposed without a benefit cost analysis.

Response. The Commission has concluded that the provisions addressed in this rulemaking do not involve a backfit because they address only reactors that have permanently ceased operations and § 50.109 only applies to design, construction and operation of a facility. These regulations are primarily procedural in nature and, to the extent they address nonprocedural matters, they are a codification of existing process.

Comment. A few commenters noted that the regulatory analysis for the proposed rule did not evaluate the alternatives to the proposed new regulatory requirements and existing requirements do not require a license termination plan or a license amendment to approve a license termination plan. The regulatory analysis does not accomplish the objective of ensuring that all regulatory burdens are needed, justified, and minimal.

Response. The regulatory analysis did evaluate the alternatives to the proposed new regulatory requirements. The license termination plan is not a new requirement because, under the existing rule, licensees are required to submit a proposed decommissioning plan for approval within 2 years of permanent shutdown. Currently, licensees who plan to delay decommissioning by including a period of storage must submit a final decommissioning plan for approval before starting decommissioning. Current NRC policy is to approve the decommissioning plan by license amendment. Because the proposed rule would permit the licensee use of the § 50.59 process to perform major dismantlement activities, the license termination plan is less complex than a decommissioning plan and covers the remainder of activities requiring completion to terminate the license, other than dismantlement activities. The changes adopted in the rulemaking primarily provide additional flexibility to licensees that reduces burden without reducing safety by allowing licensees to undertake the majority of decommissioning activities without first obtaining NRC approval.

Comment. Several commenters wanted the option of entombment to be allowed because restricted release will be allowed when the residual radiation criteria rule is final. Aside from the difficulty of disposal, the money not spent on LLW burial is substantial. The interest on this money would be more than adequate to provide for the

maintenance and surveillance required for the entombment option. The public, including local communities, may be interested in not transporting waste across state boundaries and in keeping funds that would otherwise be spent on disposal within the community.

Response. The issue of entombment was not addressed in this rule. The NRC position on entombment is the same as in the current rule. Entombment would only be permitted for very special circumstances but would involve a continued license on a case-by-case basis. The concept of restricted release included in the proposed rule on residual radiation criteria would involve termination of the license with restrictions in place to limit the use of the facility by the public, but certain radiological criteria for restricted release would have to be met.

Comment. Several individual commenters wanted to know whether NRC rules allow the optional period of storage of the reactor facility to be longer than 60 years and does the 60-year completion date for decommissioning specified in the current rule consider storage of fuel in an ISFSI. One commenter stressed that spent fuel should not be separated from any of the phases of decommissioning because this is a piecemeal approach and inappropriate. Another commenter stated that the licensee should be required to maintain capability to handle the fuel for dry cask storage.

Response. The primary considerations of the proposed rule were procedural, with emphasis on the issue of premature closure. Other aspects of the existing rule were unchanged. A 60-year period for completion of decommissioning is still imposed, subject to other considerations delineated in the current rule requirements. The existing rule, as well as the proposed rule, consider the storage and maintenance of spent fuel as an operational consideration and provide separate Part 50 requirements for this purpose.

Comment. Several commenters noted that the requirements of this proposed rule and the proposed residual radiological criteria rule should be coordinated to avoid redundancy.

Response. The two rules will be coordinated.

Comment. A few commenters noted that a complete site characterization should be included at the initiation of decommissioning activities and that mandatory site radiological surveys should be required before issuing a new license to establish background conditions.

Response. These considerations are being addressed during finalization of the residual radiological criteria rule.

Comment. Finally, several commenters requested that the NRC consider the impacts of the proposed "safeguards for nuclear fuel or

high level radioactive waste" rule (60 FR 42079; August 15, 1995) (which affects Parts 60, 72, 73, and 75) on this rule when that proposed rule is issued in final form.

Response. This rule is primarily directed toward the procedural requirements necessary for power reactor decommissionings. Therefore, the requirements imposed by this rule can be treated independently from the other "safeguards" rule under development. That rule, when final, may modify some of the technical requirements imposed by this final rule.

Resolution of Comments on the Draft Policy Statement

On February 3, 1994 (59 FR 5216), the NRC published in the Federal Register a draft policy statement and accompanying criteria relating to power reactor licensee use of decommissioning trust funds before NRC approval of licensees' decommissioning plans. The proposed rulemaking to amend the procedural aspects of decommissioning (60 FR 2210; July 20, 1995) codified the position embodied in the draft policy statement. Based on the NRC's resolution of comments on the proposed rule and incorporated into this final rule, the criteria in the draft policy statement have been modified. No final policy statement will be issued. Other changes in the final rule pertaining to licensee use of decommissioning trust funds were discussed earlier

in the section on Response to Comments.

The NRC received comments on the draft policy statement from the following individuals or organizations:

1. Michigan Department of Commerce
2. Citizens Awareness Network
3. Mary P. Sinclair
4. Detroit Edison Company
5. Committee for a Safe Energy Future
6. Jon Block
7. Nuclear Energy Institute
8. Yankee Atomic Electric Company
9. Virginia Power Company
10. New England Coalition on Nuclear Pollution
11. Winston & Strawn
12. Consolidated Edison Company
13. Maryland Department of the Environment
14. TU Electric Company

The public interest group, individual commenters, and one State oppose allowing any withdrawals from decommissioning trust funds before the NRC approves a licensee's decommissioning plan, a procedure that this final rule has discontinued. The other commenters generally

supported the draft policy statement, although they disagreed with certain provisions or took issue with the need for it. Specific comments and observations, and the NRC analysis of and response to them, are discussed below.

Specific comments.

Comment 1. The trust agreements may need to be modified to include low-level radioactive waste storage and disposal (LLW) and interim spent fuel storage as allowable decommissioning costs when these costs are incurred as part of additional, temporary facilities at particular sites. LLW disposal costs, in particular, should be able to be paid from the decommissioning waste fund without waiting 60 days for NRC approval. Provisions should be included for decommissioning nonradioactive structures associated with the reactor (Commenters 1 and 4).

Response. The policy statement and this rule were not intended to address this issue. This issue is being addressed separately (see SECY 95-223; September 1, 1995). As provided in 10 CFR 50.75, financial assurance for decommissioning includes the cost of disposal of LLW associated with reactor decommissioning. If a temporary facility is built to store LLW under the Part 50 reactor license, the trust agreement should have been

structured to include these costs. Although the NRC definition of decommissioning excludes interim storage of spent reactor fuel, a licensee is required to provide for the cost of interim spent fuel storage under 10 CFR 50.54(bb).

With respect to the issue of waiving the 60-day NRC approval period for withdrawals to pay for LLW shipments, this final rule eliminates the procedure to which this comment referred.

Comment 2. The NRC should not allow decommissioning trust fund withdrawals before an environmental assessment is performed while the reactor licensee has a possession-only license because: (1) it will allow large-scale decommissioning activities without a resident NRC inspector on-site during the removal of irradiated components; (2) it is inconsistent with the mandate of the NRC, which is to implement a submitted, reviewed, publicly evaluated, and approved decommissioning plan before large-scale decommissioning activities begin; (3) the health and safety of the workers and the public can not be adequately served by the experimental process of the component removal process, and (4) existing NRC regulations state that a licensee may only conduct limited activities prior to approval of the decommissioning plan (e.g., decontamination, minor component disassembly, shipment and storage of spent fuel). Reasonable interpretation of the rules does

not require expansion of 10 CFR 50.59 and/or activities permitted under a license (Commenters 2, 3, 5, 6, and 10).

"There could be insufficient financial resources remaining to decommission Nuclear Power Plants thus, creating a potential burden on the State and, serious impairment of radioactive material licensee's ability to complete decommissioning. Most existing decommissioning 'certifications and funding plans' are generally acknowledged by the NRC to already be severely UNDERFUNDED. This rule would exacerbate that situation" (Commenter 13).

Response. This final rule addresses the process that licensees are to use for post-shutdown decommissioning activities, as well as the limits on the amounts to be withdrawn from decommissioning trust funds. By permitting a licensee to perform certain decommissioning activities and to withdraw funds for those activities through use of the PSDAR submittal process required in the final rule will allow the licensee to reduce its overall decommissioning costs by taking advantage of lower low-level radioactive waste disposal costs. This will benefit the licensee and its ratepayers without adversely affecting public health and safety.

Comment 3. The NRC should develop a similar policy for operating plants and should allow licensees to withdraw decommissioning trust funds to dispose of structures and equipment no longer being used for operating plants (Commenters 7, 8 (by reference), and 14).

Footnote 2 of the policy statement should be revised to clarify that the policy statement does not apply "to licensee withdrawals from decommissioning funds for operating plants" rather than stating that the policy statement does not apply "to licensees with operating nuclear reactors" (Commenter 11).

Response. The NRC has concluded that allowing decommissioning trust fund withdrawals for disposals by nuclear power plants that continue to operate is not warranted. These activities are more appropriately considered operating activities and should be financed in that way.

Footnote 2 is not included in this final rule.

Comment 4. The policy statement may become obsolete if the NRC adopts a new definition of decommissioning as proposed on February 2, 1994 (59 FR 4868). This definition states, "Decommissioning means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits use of the property for unrestricted use and termination of the license, or (2) release of the property under restricted conditions and termination of the license."

To avoid obsolescence of the policy statement as a result of changes in the definition of decommissioning, the commenters recommend replacing all references to release of the site for unrestricted use with "decommissioning of the site consistent with the definition in 10 CFR 50.2" (Commenters 7, 8 (by reference), and 11).

Response. The NRC agrees with this recommendation and has changed this final rule accordingly.

Comment 5. Two commenters disagree with a statement in the draft policy statement, "If a licensee of a permanently shut down facility spends decommissioning trust funds on legitimate decommissioning activities, the timing of these expenditures, either before or after NRC approves a licensee's decommissioning plan, should not adversely affect public health and safety, provided adequate funds are maintained to restore the facility to a safe storage configuration in case decommissioning activities are interrupted unexpectedly" (Commenter 7's emphasis). The commenters state that maintaining a viable SAFSTOR option beyond plan approval should not be required for cases where another option has been approved by NRC (Commenters 7 and 8).

The draft policy statement misuses the term "SAFSTOR" to mean maintenance of a site in a safe storage condition prior to receipt of Decommissioning Plan approval and commencement of decommissioning

rather than a specific decommissioning alternative defined in NRC regulations (Commenters 11 and 14).

Response. Commenter 7 has misinterpreted the intent of this statement. First, this part of the policy statement was drafted to make the point that any expenditures for decommissioning activities normally viewed as necessary would not be detrimental to public health and safety, notwithstanding the timing of these expenditures, unless they were large enough to prevent the licensee from returning its facility to a safe storage configuration if the decommissioning process were to go awry. This is not the same as requiring a licensee to switch from DECON (immediate dismantlement) to SAFSTOR after the NRC has approved the licensee's decommissioning plan.

This final rule modifies use of the above-referenced criterion for decommissioning trust fund withdrawals. However, the rule corrects any references to SAFSTOR when it means to address the general ability of a licensee to return its reactor to safe storage while awaiting further decommissioning.

Comment 6. Criterion 4 is redundant of the other criteria (Commenters 7 and 8). At a minimum, the statement should indicate that items (c) and (d) of criterion 4 do not require NRC approval before a licensee undertakes the proposed activities (Commenter 8). Redundancies can be eliminated by factoring the first three criteria

into criterion 4. However, issuance of the policy statement based on criterion 4 (or the other criteria) is premature in that the NRC is currently considering more definitive guidance on acceptable pre-plan-approval decommissioning activities (Commenter 11).

Response. The NRC agrees that some confusion may have arisen by including criterion 4 in the policy statement. The NRC included this criterion to provide guidance on the allowed decommissioning activities as opposed to the use of decommissioning trust funds for those activities. Criterion 4 is a quote from Commission guidance in the SRM of January 14, 1993, and, to some degree, overlaps the other criteria of the policy statement. The NRC has removed criterion 4 as a separate criterion in this final rule.

Comment 7. The "ancillary issue" in the draft policy statement should be expanded to include a number of expenses that are paid out of decommissioning trusts by operating plants well in advance of licensee preparation and submission of the decommissioning plan. These expenses include, but are not limited to, trust fees, investment manager fees, income taxes, and periodic site-specific studies (Commenters 7, 8 (by reference), 11, and 14).

The policy statement should be revised to state specifically that if a licensee determines that it meets the criteria for de minimis

withdrawals, it need not request permission from the NRC to use these funds (Commenter 8).

"...The section dealing with 'de minimis' withdrawals for developing the decommissioning plan also seems to be outside the original intent for use of these funds. These withdrawals may seem to be a minor portion of funds allocated for decommissioning, but it starts a process that would allow utilities to tap these funds, if they can fit activities into the definition of decommissioning or simply request to use these funds for other purposes.... Other uses are unacceptable, even if they are subject to prior regulator approval" (Commenter 13).

Response. The intent of the ancillary issue was to allow de minimis withdrawals from decommissioning trust funds of up to \$5 million for decommissioning-related administrative and other expenses without prior NRC consent notwithstanding the operating status of the plant. The final rule has changed this withdrawal amount to up to 3 percent of the generic amount specified in § 50.75(c). This withdrawal amount is for purposes of planning for decommissioning (paper studies) and pertains to licensees of operating as well as permanently shut down plants. Permission from the NRC to use these funds in de minimis amounts is unnecessary as long as the amount and purpose of the withdrawal is documented.

With respect to Commenter 13's concerns, the NRC has specified a maximum limit for de minimis withdrawals. If a licensee were to exceed this limit or use funds for non-decommissioning purposes, it would be subject to NRC enforcement action.

Comment 8. "...The NRC has neither articulated the reasons why this detailed level of oversight [discussed in the policy statement] is needed, nor has the NRC provided specific examples of potential waste and misuse of funds that would warrant their proposed oversight.... Absent an appropriate justification for the implementation of this policy statement, ... this policy statement represents regulation without benefit [and that NRC concerns expressed in the policy statement] are not tangible for decommissioning." Thus, the policy statement should not be issued (Commenter 9).

Also, "the draft policy statement provides no basis for the NRC's conclusion that prior NRC review of pre-plan-approval decommissioning fund expenditures should be required." The draft policy statement may satisfy the Commission's directive to the NRC staff to develop a policy without including an approval mechanism (Commenter 11).

The draft policy statement is not clear as to the purpose of the NRC review of decommissioning expenditures before decommissioning plan approval. The only reason for the review, given in the statement of

policy, is to ensure the health and safety of the general public. There are other regulatory mechanisms for evaluating the activity for which the funds are withdrawn without reviewing the actual withdrawal from the fund. The expenditure of decommissioning trust funds for legitimate decommissioning activities is an economic and not a safety concern (Commenter 14).

Response. Although the NRC did not include specific examples of waste and misuse of funds in the policy statement, as with any industrial process, costly mistakes can conceivably occur in decommissioning. The NRC also disagrees that codifying decommissioning trust fund withdrawals represents regulation without benefit. The NRC has specifically promulgated decommissioning requirements in 10 CFR 50.82 that include licensee PSDAR submittal process that is intended for keeping the NRC and public informed of the licensee's planned decommissioning activities. The intent of the regulations is to require licensees to maintain the entire amount of funds needed for decommissioning in a specified assurance mechanism until the funds are used for their intended decommissioning activities.

The PSDAR is closely tied to a licensee's provision of assurance to fund the decommissioning activities adequately. Without any NRC criteria for expenditures before the PSDAR submittal process is completed, the decommissioning trust fund could become a shell and

thus defeat the purpose of NRC decommissioning funding assurance regulations. Because of the safety implications of inadequate decommissioning funds, the NRC believes it has responsibility for specifying withdrawal rates, notwithstanding the reviews that rate regulators may perform.

Comment 9. Trust fund withdrawals should also be permitted for early decommissioning-related activities that, although not themselves directly reducing radioactivity at the site, will significantly facilitate such activities when they subsequently occur (Commenters 11 and 12).

Response. In this final rule, withdrawals for planning activities are allowed before completion of the PSDAR process.

Comment 10. The NRC should clarify footnote 2 to indicate that it applies to licensees of multi-unit sites. "So long as usage of trust withdrawals is identifiable with the shut down reactor and does not diminish decontamination funding subsequently available for reactors which are continuing to operate, there is no reason why multi-reactor licensees should be treated differently than single-reactor licensees for purposes of this policy statement" (Commenter 12).

Response. The NRC agrees with this statement. However, footnote 2 is not included in this final rule.

Comment 11. "If the NRC believes that NRC review and approval of pre-plan-approval decommissioning expenditures is necessary, it should act through rulemaking rather than policy.... Since prior NRC review of decommissioning fund withdrawals is not currently required, if the NRC wishes to impose such a requirement, it should initiate rulemaking to revise its decommissioning regulations accordingly" (Commenter 11).

Response. This final rule codifies criteria for decommissioning trust fund withdrawals. Thus, this commenter's concerns have been addressed.

Comment 12. "The 'tacit consent' approach for reviewing licensee expenditure plans is inappropriate" and unsupported by the reasons the NRC stated for its policy. By expressly preserving the possibility that it would take action to prevent a fund withdrawal, the NRC blurs its asserted distinction between review and approval. Also, it is not clear that "tacit consent" and "approval" are legally distinguishable for purposes of determining whether the NRC is engaged in a "licensing action" that could involve public participation and environmental review (Commenter 11).

Response. The NRC does not use "tacit consent" in this final rule. Thus, the concerns expressed in this comment should be assuaged.

Comment 13. "Criterion 1...should be revised to eliminate the provision that withdrawals must be for activities 'that would necessarily occur under most reasonable decommissioning scenarios.'" This phrase adds nothing to the preceding provision that the withdrawal must be for "legitimate decommissioning activities." Because licensees may face decommissioning expenditures for activities that are within the NRC's definition of decommissioning but nonetheless unique to their plant(s), the proposed provision is inappropriately restrictive (Commenter 11).

"Criterion 1 is overly restrictive and burdensome.... If the NRC wants to prevent activities that preclude release of the site for [un]restricted use or are not in support of decommissioning efforts it should require review of the activity itself through any of the other available mechanisms such as 10 CFR 50.59 or special rulemaking.... The basic premise is that in the event that there are circumstances or conditions which delay or preclude proceeding with the decommissioning effort there will be funds available to place the plant in a storage condition until

the event or circumstance is resolved. Thus, as long as the value of the fund does not fall below the regulatory required amount in effect at the time of the request the withdrawal should be allowed. Thus, the only requirement should be that the utility document that [the] activity was a legitimate decommissioning activity and the expenditure was reasonable" (Commenter 14).

Response. The NRC did not mean to imply that decommissioning activities unique to one site would not be eligible for early trust fund withdrawals. However, because we agree that the phrase, "legitimate decommissioning activities," is sufficient, the NRC has eliminated the phrase from this final rule.

Comment 14. "...The explicit characterization as a decommissioning 'contingency' of the funding 'necessary to maintain the status quo' could be construed inappropriately to require that licensees include funding for that purpose in their decommissioning funds.... If this criterion is retained, the language regarding provisions for this contingency should be deleted from the policy statement" (Commenter 11).

Response. This terminology has been eliminated in this final rule.

Comment 15. "It does not seem necessary that NRC approve requests for the 'withdrawal of decommissioning funds for early equipment removal, prior to approval of the utilities['] decommissioning plans. This does not seem in concert with the intent of the sample statement under Background '.... the fund trustee should only release funds upon certification that decommissioning is proceeding pursuant to an NRC-approved plan'" (Commenter 13).

Response. This final rule does not continue the language in question.

Comment 16. "...This ruling may be judged as an item of Compatibility [for Agreement States]. Because Maryland regulations, policies, etc., are expected to closely follow Federal rules and procedures, we would be forced to adopt and allow our licensees to use the same principle" (Commenter 13).

Response. The NRC does not believe that this is an issue of State compatibility because this final rule only applies to power reactor licensees, which are exclusively NRC licensees.

Summary of Changes in the Final Rule

Based on the response to comments, a few changes were made in the final rule. Otherwise, the final rule provisions are the same as

those presented in the "background" section under the section titled proposed amendments. Specific changes made to the proposed rule in the final rule are summarized as follows:

(1) Section 50.2. The definition of "major radioactive components" has been clarified.

(2) Section 50.36a(a)(1). The amendment has been changed to exclude systems that are no longer necessary for compliance.

(3) Section 50.59. Proposed § 50.59(e) was eliminated.

However, three of the proposed rule requirements contained in § 50.59(e) were moved to § 50.82(a)(6) and (7). Placing these requirements in § 50.82 as overall constraints, rather than specific requirements for each § 50.59 activity, required modification of the constraint that the decommissioning activities not result in significantly increasing decommissioning costs. Thus, the final rule (§ 50.82(a)(6)(iii)) prohibits decommissioning activities that would result in there no longer being reasonable assurance that adequate funds will be available to complete decommissioning. In addition, the final rule requires in § 50.82(a)(7) that changes from those specified in the PSDAR that would result in significantly increasing decommissioning costs require written notification to the NRC. The fourth requirement that the terms of the existing license not be violated was eliminated. The requirement to consider environmental impact in the PSDAR, § 50.82(a)(4) was modified to explicitly require

the reasons for concluding that any environmental impacts will be bounded by existing analysis.

(4) Section 50.71. Section 50.71(e)(4) was revised to permit nuclear power reactor licensees that have submitted the certifications required under § 50.82(a)(1) to update the FSAR every 24-months.

(5) Sections 50.82(a)(4)(i) and (6). The licensee is required to send a copy of the PSDAR and written notification of departure from the PSDAR to the NRC and affected State(s).

(6) Section 50.82(a)(8)(ii). The phrase "being permitted to use" was removed from this section to avoid any incorrect interpretation that the NRC must explicitly approve decommissioning funding expenditures.

(7) Section 50.82. Specifies that once the rule is effective, all power reactor licensees must comply with it. Power reactor licensees that possess an approved plan as well as licensees that applied for plan approval before the rule took effect would have the plan considered a PSDAR submittal, and licensees would be permitted to perform decommissioning activities in accordance with § 50.82. However, for power reactor licensees who are involved in Subpart G hearings of 10 CFR Part 2, conversion to the new rule will not be permitted until the hearing process is completed and those licensees will be subject to any orders arising from these hearings absent any orders from the Commission.

(8) Section 50.82(a)(1)(iii). Specifies that once the rule is effective, power reactor licensees whose licenses have been modified, before the effective date of this rule, to possess but not operate the facility, will be considered to have submitted the certifications required in §50.82(a)(1).

(9) To improve clarity, the first sentence in § 2.1205(d)(1) has been rewritten from that proposed to that found in the existing regulation.

(10) To improve clarity and maintain parallelism of requirements, the last sentence of § 51.53(b) has been rewritten from that found in the proposed rule to correspond with the language found in § 51.95(b) of the proposed (and existing) rule.

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 be a major Federal action significantly affecting the quality of the human environment and therefore, an environmental impact statement is not required. The final rule clarifies current decommissioning requirements for nuclear power reactors in 10 CFR Part 50 and presents a more efficient, uniform, and understandable process. The Commission

has analyzed the major environmental impacts associated with decommissioning in the Generic Environmental Impact Statement (GEIS), NUREG-0586, August 1988,¹ published in conjunction with the Commission's final decommissioning rule (53 FR 24018; June 27, 1988).

Insofar as this rule would allow major decommissioning (dismantlement) to proceed without an environmental assessment, the environmental impacts of this rule are within the scope of the prior GEIS. The environmental assessment for the final rule and finding of no significant impact on which this determination is based are available for inspection and photocopying for a fee at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and the finding of no significant impact are available from Carl Feldman, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, (301) 415-6194.

Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These requirements were approved by the Office of Management and Budget, approval number 3150-0011.

Because the rule will relax existing information collection

requirements, the public burden for this collection of information is expected to be decreased by 12,202 hours per licensee. This reduction includes the time required for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments on any aspect of this collection of information, including suggestions for further reducing this burden, to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001, or by Internet electronic mail to BJS1@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NE0B-10202, (3150-0011), Office of Management and Budget, Washington, DC 20503.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Regulatory Analysis

The NRC has prepared a regulatory analysis for this final rule. The analysis qualitatively examines the costs and benefits of the

alternatives considered by the NRC. In the response to comments, the NRC concluded that only some minor changes to the draft regulatory analysis were necessary, corresponding to some minor procedural changes in the final rule. The regulatory analysis is available for inspection in the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC 20555-0001. Single copies of the analysis may be obtained from Dr. Carl Feldman, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6194.

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule will not have a significant economic impact on a substantial number of small entities. The final rule modifies requirements for timely decommissioning of nuclear power plants. The companies that own these plants do not fall within the scope of the definition of small entities as given in the Regulatory Flexibility Act or the Small Business Size Standards promulgated in regulations issued by the Small Business Administration (13 U.S.C. Part 121). This discussion constitutes the analysis for the regulatory flexibility certification requirement.

Backfit Analysis

The Commission has determined that the backfit rule, 10 CFR 50.109, does not apply to these final amendments, and therefore, a backfit analysis has not been prepared for this rule. The scope of the backfit provision in 10 CFR 50.109 is limited to construction and operation of reactors. These final amendments would only apply to reactors that have permanently ceased operations and, as such, would not constitute backfits under 10 CFR 50.109.

List of Subjects

10 CFR Part 2

Administrative practice and procedure, Anti trust, Byproduct material, Classified information, Environmental protection, Nuclear materials, Nuclear power plants and reactors, Penalties, Sex discrimination, Source material, Special nuclear material, Waste treatment and disposal.

10 CFR Part 50

Anti trust, 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 51

Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

For 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. 552 and 553, the NRC is adopting the following amendments to 10 CFR Parts 2, 50, and 51.

PART 2-- RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS

1. The authority citation for part 2 continues to read as follows:

AUTHORITY: Secs. 161, 181, 68 Stat. 948, 953, as amended (42 U.S.C. 2201, 2231); sec. 191, as amended, Pub. L. 87-615, 76 Stat. 409

(42 U.S.C. 2241); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); 5 U.S.C. 552.

Section 2.101 also issued under secs. 53, 62, 63, 81, 103, 104, 105, 68 Stat. 930, 932, 933, 935, 936, 937, 938, as amended (42 U.S.C. 2073, 2092, 2093, 2111, 2133, 2134, 2135); sec. 114(f), Pub. L. 97-425 96 Stat. 2213, as amended (42 U.S.C. 10134(f)); sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332); sec. 301, 88 Stat. 1248 (42 U.S.C. 5871). Sections 2.102, 2.103, 2.104, 2.105, 2.721 also issued under secs. 102, 103, 104, 105, 183, 189, 68 Stat. 936, 937, 938, 954, 955, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2233, 2239). Section 2.105 also issued under Pub. L. 97-415, 96 Stat. 2073 (42 U.S.C. 2239). Sections 2.200-2.206 also issued under secs. 161b, i, o, 182, 186, 234, 68 Stat. 948-951, 955, 83 Stat. 444, as amended (42 U.S.C. 2201(b), (i), (o), 2236, 2282); sec. 206, 88 Stat. 1246 (42 U.S.C. 5846). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 91-190, 83 Stat. 853, as amended (42 U.S.C. 4332). Sections 2.700a, 2.719 also issued under 5 U.S.C. 554. Sections 2.754, 2.760, 2.770, 2.780, also issued under 5 U.S.C. 557. Section 2.764 and Table 1A of Appendix C also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.800 and 2.808 also issued under 5 U.S.C. 553. Section 2.809 also issued under 5 U.S.C. 553 and sec. 29, Pub. L. 85-256, 71

Stat. 579, as amended (42 U.S.C. 2039). Subpart K 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). Subpart L also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239). Appendix A also issued under sec. 6, Pub. L. 91-560, 84 Stat. 1473 (42 U.S.C. 2135). Appendix B also issued under sec. 10, Pub. L. 99 - 240, 99 Stat. 1842 (42 U.S.C. 2021b et. seq.).

2. Section 2.1201, paragraph (a)(3) is added to read as follows:

§ 2.1201 Scope of subpart.

(a) * * *

(3) The amendment of a Part 50 license following permanent removal of fuel from the Part 50 facility to an authorized facility for licensees that have previously made declarations related to permanent cessation of operations and permanent removal of fuel from the reactor in accordance with § 50.82(a)(1). Subpart L hearings for the license termination plan amendment, if conducted, must be completed before license termination.

* * * * *

3. Section 2.1203, paragraph(e) is revised to read as follows:

§ 2.1203 Docket; filing; service.

* * * * *

(e) A request for a hearing or petition for leave to intervene must be served in accordance with § 2.712 and § 2.1205(f) and (k). All other documents issued by the presiding officer or the Commission or offered for filing are served in accordance with § 2.712.

4. Section 2.1205, paragraphs (d) through (n) are redesignated as paragraphs (e) through (o), a new paragraph (c) is added, and newly designated paragraphs (d), (e)(2), (e)(4), the introductory text of paragraph (h), (i), the introductory text of paragraph (j), the introductory text of paragraph (k), (k)(3), the introductory text of paragraph (l)(1), (l)(2) are revised to read as follows:

§ 2.1205 Request for a hearing; petition for leave to intervene.

* * * * *

(c) For amendments of Part 50 licenses under § 2.1201(a)(3), a notice of receipt of the application, with reference to the opportunity for a hearing under the procedures set forth in this subpart, must be published in the Federal Register at least 30 days prior to issuance of the requested amendment by the Commission.

(d) A person, other than an applicant, shall file a request for a hearing within--

(1) Thirty days of the agency's publication in the Federal Register of a notice referring or relating to an application or the licensing action requested by an application, which must include a reference to the opportunity for a hearing under the procedures set forth in this subpart. With respect to an amendment described in § 2.1201(a)(3), other than the one to terminate the license, the Commission, prior to issuance of the requested amendment, will follow the procedures in § 50.91 and § 50.92(c) to the extent necessary to make a determination on whether the amendment involves a significant hazards consideration. If the Commission finds there are significant hazards considerations involved in the requested amendment, the amendment will not be issued until any hearings under this paragraph are completed.

(2) If a Federal Register notice is not published in accordance with paragraph (d)(1), the earliest of -

(i) Thirty days after the requester receives actual notice of a pending application, or

(ii) Thirty days after the requester receives actual notice of an agency action granting an application in whole or in part, or

(iii) One hundred and eighty days after agency action granting an application in whole or in part.

(e) * * *

(2) How the interests may be affected by the results of the proceeding, including the reasons why the requestor should be permitted a hearing, with particular reference to the factors set out in paragraph (h) of this section;

* * * * *

(4) The circumstances establishing that the request for a hearing is timely in accordance with paragraph (d) of this section.

* * * * *

(h) In ruling on a request for a hearing filed under paragraph (d) of this section, the presiding officer shall determine that the specified areas of concern are germane to the subject matter of the proceeding and that the petition is timely. The presiding officer

also shall determine that the requestor meets the judicial standards for standing and shall consider, among other factors -

* * * * *

(i) If a hearing request filed under paragraph (b) of this section is granted, the applicant and the NRC staff shall be parties to the proceeding. If a hearing request filed under paragraphs (c) or (d) of this section is granted, the requestor shall be a party to the proceeding along with the applicant and the NRC staff, if the NRC staff chooses or is ordered to participate as a party in accordance with § 2.1213.

(j) If a request for hearing is granted and a notice of the kind described in paragraph (d)(1) previously has not been published in the Federal Register, a notice of hearing must be published in the Federal Register stating -

* * * * *

(k) Any petition for leave to intervene must be filed within 30 days of the date of publication of the notice of hearing. The petition must set forth the information required under paragraph (e) of this section.

* * * * *

(3) Thereafter, the petition for leave to intervene must be ruled upon by the presiding officer, taking into account the matters set forth in paragraph (h) of this section.

* * * * *

(l)(1) A request for a hearing or a petition for leave to intervene found by the presiding officer to be untimely under paragraph (d) or (k) of this section will be entertained only upon determination by the Commission or the presiding officer that the requestor or petitioner has established that -

* * * * *

(2) If the request for a hearing on the petition for leave to intervene is found to be untimely and the requestor or petitioner fails to establish that it otherwise should be entertained on the paragraph (l)(1) of this section, the request or petition will be treated as a petition under § 2.206 and referred for appropriate disposition.

* * * * *

5. Section 2.1211, paragraph (b) is revised to read as follows:

§ 2.1211 Participation by a person not a party.

* * * * *

(b) Within 30 days of an order granting a request for a hearing made under § 2.1205(b)-(d) or, in instances when it is published, within 30 days of notice of hearing issued under § 2.1205(j), the representative of the interested State, county, municipality, or an agency thereof, may request an opportunity to participate in a proceeding under this subpart. The request for an opportunity to participate must state with reasonable specificity the requestor's areas of concern about the licensing activity that is the subject matter of the proceeding. Upon receipt of a request that is filed in accordance with these time limits and that specifies the requestor's areas of concern, the presiding officer shall afford the representative a reasonable opportunity to make written and oral presentations in accordance with §§ 2.1233 and 2.1235, without requiring the representative to take a position with respect to the issues. Participants under this subsection may notice an appeal of an initial decision in accordance with § 2.1253 with respect to any issue on which they participate.

* * * * *

6. Section 2.1213 is revised to read as follows:

§ 2.1213 Role of the NRC staff.

If a hearing request is filed under § 2.1205(b), the NRC staff shall be a party to the proceeding. If a hearing request is filed under § 2.1205(c) or (d), within 10 days of the designation of a presiding officer pursuant to § 2.1207, the NRC staff shall notify the presiding officer whether or not the staff desires to participate as a party to the adjudication. In addition, upon a determination by the presiding officer that the resolution of any issue in the proceeding would be aided materially by the staff's participation in the proceeding as a party, the presiding officer may order or permit the NRC staff to participate as a party with respect to that particular issue.

7. Section 2.1233, paragraph (c) is revised to read as follows:

§ 2.1233 Written presentations; written questions.

* * * * *

(c) In a hearing initiated under § 2.1205(d), the initial written presentation of a party that requested a hearing or petitioned for leave to intervene must describe in detail any deficiency or omission in the license application, with references to any particular section or portion of the application considered deficient, give a detailed statement of reasons why any particular sections or portions is

deficient or why an omission is material, and describe in detail what relief is sought with respect to each deficiency or omission.

* * * * *

8. Section 2.1263, is revised to read as follows:

§ 2.1263 Stays of NRC staff licensing actions or of decisions of a presiding officer or the Commission pending hearing or review.

Applications for a stay of any decision or action of the Commission, a presiding officer, or any action by the NRC staff in issuing a license in accordance with § 2.1205(m) are governed by § 2.788, except that any request for a stay of staff licensing action pending completion of an adjudication under this subpart must be filed at the time a request for a hearing or petition to intervene is filed or within 10 days of the staff's action, whichever is later. A request for a stay of a staff licensing action must be filed with the adjudicatory decisionmaker before which the licensing proceeding is pending.

PART 50--DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

9. 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. 1244, 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).

Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951, (42 U.S.C. 5851). 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).

10. Section 50.2, the terms "Certified fuel handler," "Major decommissioning activity," "Major radioactive components," "Permanent

cessation of operations," and "Permanent fuel removal," are added to read as follows:

§ 50.2 Definitions.

* * * * *

Certified fuel handler means, for a nuclear power reactor facility, a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the Commission.

* * * * *

Major decommissioning activity means, for a nuclear power reactor facility, any activity that results in permanent removal of major radioactive components, permanently modifies the structure of the containment, or results in dismantling components for shipment containing greater than class C waste in accordance with § 61.55 of this chapter.

Major radioactive components means, for a nuclear power reactor facility, the reactor vessel and internals, steam generators, pressurizers, large bore reactor coolant system piping, and other large components that are radioactive to a comparable degree.

* * * * *

Permanent cessation of operation(s) means, for a nuclear power reactor facility, a certification by a licensee to the NRC that it has permanently ceased or will permanently cease reactor operation(s), or

a final legally effective order to permanently cease operation(s) has come into effect.

Permanent fuel removal means, for a nuclear power reactor facility, a certification by the licensee to the NRC that it has permanently removed all fuel assemblies from the reactor vessel.

* * * * *

11. Section 50.4, paragraphs (b)(8) and (b)(9) are added to read as follows:

§ 50.4 Written communications.

* * * * *

(b) * * *

(8) Certification of permanent cessation of operations. The licensee's certification of permanent cessation of operations, pursuant to § 50.82(a)(1), must state the date on which operations have ceased or will cease, and the signed and notarized original must be submitted to: The Nuclear Regulatory Commission, Document Control Desk, Washington, DC 20555-0001.

(9) Certification of permanent fuel removal. The licensee's certification of permanent fuel removal, pursuant to § 50.82(a)(1), must state the date on which the fuel was removed from the reactor

vessel and the disposition of the fuel, and the signed and notarized original must be submitted to: The Nuclear Regulatory Commission, Document Control Desk, Washington, DC 20555-0001.

* * * * *

12. Section 50.36, paragraphs (c)(6) and (c)(7) are redesignated as (c)(7) and (c)(8) and new paragraphs (c)(6) and (e) are added to read as follows:

§ 50.36 Technical specifications.

(c) * * *

(6) Decommissioning. This paragraph applies only to nuclear power reactor facilities that have submitted the certifications required by § 50.82(a)(1) and to non-power reactor facilities which are not authorized to operate. Technical specifications involving safety limits, limiting safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis.

* * * * *

(e) The provisions of this section apply to each nuclear reactor licensee whose authority to operate the reactor has been removed by license amendment, order, or regulation.

13. Section 50.36a is revised to read as follows:

§ 50.36a Technical specifications on effluents from nuclear power reactors.

(a) In order to keep releases of radioactive materials to unrestricted areas during normal conditions, including expected occurrences, as low as is reasonably achievable, each licensee of a nuclear power reactor will include technical specifications that, in addition to requiring compliance with applicable provisions of § 20.1301 of this chapter, require that:

(1) Operating procedures developed pursuant to § 50.34a(c) for the control of effluents be established and followed and that the radioactive waste system, pursuant to § 50.34a, be maintained and used. The licensee shall retain the operating procedures in effect as a record until the Commission terminates the license and shall retain each superseded revision of the procedures for 3 years from the date it was superseded.

(2) Each licensee shall submit a report to the Commission annually that specifies the quantity of each of the principal

radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous 12 months, including any other information as may be required by the Commission to estimate maximum potential annual radiation doses to the public resulting from effluent releases. The report must be submitted as specified in § 50.4, and the time between submission of the reports must be no longer than 12 months. If quantities of radioactive materials released during the reporting period are significantly above design objectives, the report must cover this specifically. On the basis of these reports and any additional information the Commission may obtain from the licensee or others, the Commission may require the licensee to take action as the Commission deems appropriate.

(b) In establishing and implementing the operating procedures described in paragraph (a) of this section, the licensee shall be guided by the following considerations: Experience with the design, construction, and operation of nuclear power reactors indicates that compliance with the technical specifications described in this section will keep average annual releases of radioactive material in effluents and their resultant committed effective dose equivalents at small percentages of the dose limits specified in § 20.1301 and in the license. At the same time, the licensee is permitted the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even

under unusual conditions which may temporarily result in releases higher than such small percentages, but still within the limits specified in § 20.1301 of this chapter and in the license. It is expected that in using this flexibility under unusual conditions, the licensee will exert its best efforts to keep levels of radioactive material in effluents as low as is reasonably achievable. The guides set out in Appendix I, provide numerical guidance on limiting conditions for operation for light-water cooled nuclear power reactors to meet the requirement that radioactive materials in effluents released to unrestricted areas be kept as low as is reasonably achievable.

14. Section 50.36b is revised to read as follows:

§ 50.36b Environmental conditions.

Each license authorizing operation of a production or utilization facility, and each license for a nuclear power reactor facility for which the certification of permanent cessation of operations required under § 50.82(a)(1) has been submitted, which is of a type described in § 50.21(b)(2) or (3) or § 50.22 or is a testing facility, may include conditions to protect the environment to be set out in an attachment to the license which is incorporated in and made a part of

the license. These conditions will be derived from information contained in the environmental report and the supplement to the environmental report submitted pursuant to §§ 51.50 and 51.53 of this chapter as analyzed and evaluated in the NRC record of decision, and will identify the obligations of the licensee in the environmental area, including, as appropriate, requirements for reporting and keeping records of environmental data, and any conditions and monitoring requirement for the protection of the nonaquatic environment.

15. Section 50.44, the introductory text of paragraph (a) is revised to read as follows:

§ 50.44 Standards for combustible gas control system in light-water-cooled power reactors.

(a) Each boiling or pressurized light-water nuclear power reactor fueled with oxide pellets within cylindrical zircaloy or ZIRLO cladding, must, as provided in paragraphs (b) through (d) of this section, include means for control of hydrogen gas that may be generated, following a postulated loss-of-coolant accident (LOCA) by--

-

(1) Metal-water reaction involving the fuel cladding and the reactor coolant,

- (2) Radiolytic decomposition of the reactor coolant, and
- (3) Corrosion of metals.

This section does not apply to a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted.

* * * * *

16. Section 50.46, paragraph (a)(1)(i) is revised to read as follows:

§ 50.46 Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors.

(a)(1)(i) Each boiling or pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy or ZIRLO cladding must be provided with an emergency core cooling system (ECCS) that must be designed so that its calculated cooling performance following postulated loss-of-coolant accidents conforms to the criteria set forth in paragraph (b) of this section. ECCS cooling performance must be calculated in accordance with an acceptable evaluation model and must be calculated for a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the most severe postulated loss-of-coolant accidents are calculated. Except as

provided in paragraph (a)(1)(ii) of this section, the evaluation model must include sufficient supporting justification to show that the analytical technique realistically describes the behavior of the reactor system during a loss-of-coolant accident. Comparisons to applicable experimental data must be made and uncertainties in the analysis method and inputs must be identified and assessed so that the uncertainty in the calculated results can be estimated. This uncertainty must be accounted for, so that, when the calculated ECCS cooling performance is compared to the criteria set forth in paragraph (b) of this section, there is a high level of probability that the criteria would not be exceeded. Appendix K, Part II Required Documentation, sets forth the documentation requirements for each evaluation model. This section does not apply to a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted.

* * * * *

17. Section § 50.48, paragraph (f) is added to read as follows:

§ 50.48 Fire protection.

* * * * *

(f) Licensees that have submitted the certifications required under § 50.82(a)(1) shall maintain a fire protection program to

address the potential for fires which could cause the release or spread of radioactive materials (i.e., which could result in a radiological hazard).

(1) The objectives of the fire protection program are to--

(i) Reasonably prevent such fires from occurring;

(ii) Rapidly detect, control, and extinguish those fires which do occur and which could result in a radiological hazard; and

(iii) Ensure that the risk of fire-induced radiological hazards to the public, environment and plant personnel is minimized.

(2) The fire protection program must be assessed by the licensee on a regular basis and revised as appropriate throughout the various stages of facility decommissioning.

(3) The licensee may make changes to the fire protection program without NRC approval if these changes do not reduce the effectiveness of fire protection for facilities, systems, and equipment which could result in a radiological hazard, taking into account the decommissioning plant conditions and activities.

18. Section 50.49, paragraph (a) is revised to read as follows:

§ 50.49 Environmental qualification of electric equipment important to safety for nuclear power plants.

(a) Each holder of or an applicant for a license for a nuclear power plant, other than a nuclear power plant for which the certifications required under § 50.82(a)(1) have been submitted, shall establish a program for qualifying the electric equipment defined in paragraph (b) of this section.

* * * * *

19. Section 50.51, the section heading is revised, the existing paragraph is designated paragraph (a), and new paragraph (b) is added to read as follows:

* * * * *

§ 50.51 Continuation of license.

* * * * *

(b) Each license for a facility that has permanently ceased operations, continues in effect beyond the expiration date to authorize ownership and possession of the production or utilization facility, until the Commission notifies the licensee in writing that the license is terminated. During such period of continued effectiveness the licensee shall --

(1) Take actions necessary to decommission and decontaminate the facility and continue to maintain the facility, including, where

applicable, the storage, control and maintenance of the spent fuel, in a safe condition, and

(2) Conduct activities in accordance with all other restrictions applicable to the facility in accordance with the NRC regulations and the provisions of the specific 10 CFR Part 50 license for the facility.

20. Section 50.54, paragraphs (o) and (y) are revised to read as follows:

§ 50.54 Conditions of licenses.

* * * * *

(o) Primary reactor containments for water cooled power reactors, other than facilities for which the certifications required under § 50.82(a)(1) have been submitted, shall be subject to the requirements set forth in Appendix J to this part.

* * * * *

(y) Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator, or, at a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted, by either a licensed senior operator or a certified fuel handler, prior to taking the action.

* * * * *

21. Section 50.59, paragraphs (d) and (e) are added to read as follows:

§ 50.59 Changes, tests and experiments.

* * * * *

(d) The provisions of this section apply to each nuclear power reactor licensee that has submitted the certification of permanent cessation of operations required under § 50.82(a)(1)(i).

(e) The provisions of paragraphs (a) through (c) of this section apply to each non-power reactor licensee whose license no longer authorizes operation of the reactor.

22. Section 50.60, paragraph (a) is revised to read as follows:

§ 50.60 Acceptance criteria for fracture prevention measures for light-water nuclear power reactors for normal operation.

(a) Except as provided in paragraph (b) of this section, all light-water nuclear power reactors, other than reactor facilities for which the certifications required under § 50.82(a)(1) have been submitted, must meet the fracture toughness and material surveillance program requirements for the reactor coolant pressure boundary set forth in Appendices G and H to this part.

* * * * *

23. Section 50.61, paragraph (b)(1) is revised to read as follows:

§ 50.61 Fracture toughness requirements for protection against pressurized thermal shock events.

* * * * *

(b) Requirements.

(1) For each pressurized water nuclear power reactor for which an operating license has been issued, other than a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted, the licensee shall have projected values of RT_{PTS} , accepted by the NRC, for each reactor vessel beltline material for the EOL fluence of the material. The assessment of RT_{PTS} must use the calculation procedures given in paragraph (c)(1) of this section, except as provided in paragraphs (c)(2) and (c)(3) of this section. The assessment must specify the bases for the projected value of RT_{PTS} for each vessel beltline material, including the assumptions regarding core loading patterns, and must specify the copper and nickel contents and the fluence value used in the calculation for each beltline material. This assessment must be updated whenever there is a significant⁽²⁾ change in projected values of

⁽²⁾Changes to RT_{PTS} values are considered significant if either the previous value or the current value, or both values, exceed the screening criterion prior to the expiration of the operating license, including any renewed term, if applicable for the plant.

RT_{PTS}, or upon request for a change in the expiration date for operation of the facility.

* * * * *

24. Section 50.62, paragraph (a) is revised to read as follows:

§ 50.62 Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants.

(a) *Applicability.* The requirements of this section apply to all commercial light-water-cooled nuclear power plants, other than nuclear power reactor facilities for which the certifications required under § 50.82(a)(1) have been submitted.

* * * * *

25. Section 50.65, paragraph (a)(1) is revised to read as follows:

§ 50.65 Requirements for monitoring the effectiveness of maintenance at nuclear power plants.

(a)(1) Each holder of a license to operate a nuclear power plant under §§ 50.21(b) or 50.22 shall monitor the performance or condition of structures, systems, or components, against licensee-established

goals, in a manner sufficient to provide reasonable assurance that such structures, systems, and components, as defined in paragraph (b), are capable of fulfilling their intended functions. Such goals shall be established commensurate with safety and, where practical, take into account industry-wide operating experience. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken. For a nuclear power plant for which the licensee has submitted the certifications specified in § 50.82(a)(1), this section only shall apply to the extent that the licensee shall monitor the performance or condition of all structures, systems, or components associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that such structures, systems, and components are capable of fulfilling their intended functions.

* * * * *

26. Section 50.71, paragraph (e)(4) is revised and paragraph (f) is added to read as follows:

§ 50.71 Maintenance of records, making of reports.

(e) * * *

(4) Subsequent revisions must be filed annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months. The revisions must reflect all changes up to a maximum of 6 months prior to the date of filing. For nuclear power reactor facilities that have submitted the certification required by § 50.82(a)(1)(i), subsequent revisions must be filed every 24 months.

* * * * *

(f) The provisions of this section apply to nuclear power reactor licensees that have submitted the certification of permanent cessation of operations required under § 50.82(a)(1)(i). The provisions of paragraphs (a), (c), and (d) of this section also apply to non-power reactor licensees that are no longer authorized to operate.

27. Section 50.75, paragraph (f) is revised to read as follows:

§ 50.75 Reporting and recordkeeping for decommissioning planning.

* * * * *

(f)(1) Each power reactor licensee shall at or about 5 years prior to the projected end of operations submit a preliminary

decommissioning cost estimate which includes an up-to-date assessment of the major factors that could affect the cost to decommission.

(2) Each non-power reactor licensee shall at or about 2 years prior to the projected end of operations submit a preliminary decommissioning plan containing a cost estimate for decommissioning and an up-to-date assessment of the major factors that could affect planning for decommissioning. Factors to be considered in submitting this preliminary plan information include--

(i) The decommissioning alternative anticipated to be used. The requirements of § 50.82(b)(4)(i) must be considered at this time;

(ii) Major technical actions necessary to carry out decommissioning safely;

(iii) The current situation with regard to disposal of high-level and low-level radioactive waste;

(iv) Residual radioactivity criteria;

(v) Other site specific factors which could affect decommissioning planning and cost.

(3) If necessary, the cost estimate, for power and non-power reactors, shall also include plans for adjusting levels of funds assured for decommissioning to demonstrate that a reasonable level of assurance will be provided that funds will be available when needed to cover the cost of decommissioning.

* * * * *

28. Section 50.82 is revised to read as follows:

§ 50.82 Termination of License.

For power reactor licensees who, before the effective date of this rule, either submitted a decommissioning plan for approval or possess an approved decommissioning plan, the plan is considered to be the PSDAR submittal required under paragraph (a)(4) of this section and the provisions of this section apply accordingly. For power reactor licensees whose decommissioning plan approval activities have been relegated to notice of opportunity for a hearing under Subpart G of 10 CFR Part 2, the public meeting convened and 90-day delay of major decommissioning activities required in paragraphs (a)(4)(ii) and (a)(5) of this section shall not apply, and any orders arising from proceedings under Subpart G of 10 CFR Part 2 shall continue and remain in effect absent any orders from the Commission.

(a) For power reactor licensees--

(1)(i) When a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of § 50.4(b)(8);

(ii) Once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of § 50.4(b)(9) and;

(iii) For licensees whose licenses have been permanently modified to allow possession but not operation of the facility, before the effective date of this rule, the certifications required in paragraphs (a)(1)(i)-(ii) of this section shall be deemed to have been submitted.

(2) Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

(3) Decommissioning will be completed within 60 years of permanent cessation of operations. Completion of decommissioning beyond 60 years will be approved by the Commission only when necessary to protect public health and safety. Factors that will be considered by the Commission in evaluating an alternative that provides for completion of decommissioning beyond 60 years of permanent cessation of operations include unavailability of waste disposal capacity and other site-specific factors affecting the licensee's capability to carry out decommissioning, including presence of other nuclear facilities at the site.

(4)(i) Before to or 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 report must include a description of the planned decommissioning activities along with a schedule for their accomplishment, an estimate of expected costs, and 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.

(ii) The NRC shall notice receipt of the PSDAR and make the PSDAR available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the PSDAR. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, that is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(5) Licensees shall not perform any major decommissioning activities, as defined in § 50.2, until 90 days after the NRC has received the licensee's PSDAR submittal and until certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel, as required under § 50.82(a)(1), have been submitted.

(6) Licensees shall not perform any decommissioning activities, as defined in § 50.2, that--

(i) Foreclose release of the site for possible unrestricted use;

(ii) Result in significant environmental impacts not previously reviewed; or

(iii) Result in there no longer being reasonable assurance that adequate funds will be available for decommissioning.

(7) In taking actions permitted under § 50.59 following submittal of the PSDAR, the licensee shall notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that significantly increase the decommissioning cost.

(8)(i) Decommissioning trust funds may be used by licensees if--

(A) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in § 50.2;

(B) The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise and;

(C) The withdrawals would not inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license.

(ii) Initially, 3 percent of the generic amount specified in § 50.75 may be used for decommissioning planning. For licensees that have submitted the certifications required under § 50.82(a)(1) and commencing 90 days after the NRC has received the PSDAR, an additional 20 percent may be used. A site-specific decommissioning cost estimate must be submitted to the NRC prior to the licensee using any funding in excess of these amounts.

(iii) Within 2 years following permanent cessation of operations, if not already submitted, the licensee shall submit a site-specific decommissioning cost estimate.

(iv) For decommissioning activities that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide a means of adjusting cost estimates and associated funding levels over the storage or surveillance period.

(9) All power reactor licensees must submit an application for termination of license. The application for termination of license must be accompanied or preceded by a license termination plan to be submitted for NRC approval.

(i) The license termination plan must be a supplement to the FSAR or equivalent and must be submitted at least 2 years before termination of the license date.

(ii) The license termination plan must include--

(A) A site characterization;

(B) A description of remaining dismantlement activities;

(C) Plans for site remediation;

(D) Detailed plans for the final radiation survey;

(E) A description of the end use of the site, if restricted;

(F) An updated site-specific analysis of remaining decommissioning costs; and

(G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities.

(iii) The NRC shall notice receipt of the license termination plan and make the license termination plan available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the license termination plan. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(10) If the license termination plan demonstrates that the remainder of decommissioning activities will be performed in accordance with the regulations in this chapter, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment and after notice to interested persons, the Commission shall approve the plan, by license amendment, subject to such conditions and limitations as it deems appropriate and necessary and authorize implementation of the license termination plan.

(11) The Commission shall terminate the license if it determines that--

(i) The remaining dismantlement has been performed in accordance with the approved license termination plan, and

(ii) The terminal radiation survey and associated documentation demonstrates that the facility and site are suitable for release.

(b) For non-power reactor licensees--

(1) A licensee that permanently ceases operations must make application for license termination within 2 years following permanent cessation of operations, and in no case later than 1 year prior to expiration of the operating license. Each application for termination of a license must be accompanied or preceded by a proposed decommissioning plan. The contents of the decommissioning plan are specified in paragraph (b)(4) of this section.

(2) For decommissioning plans in which the major dismantlement activities are delayed by first placing the facility in storage, planning for these delayed activities may be less detailed. Updated detailed plans must be submitted and approved prior to the start of these activities.

(3) For decommissioning plans that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide that--

(i) Funds needed to complete decommissioning be placed into an account segregated from the licensee's assets and outside the licensee's administrative control during the storage or surveillance period, or a surety method or fund statement of intent be maintained in accordance with the criteria of § 50.75(e); and

(ii) Means be included for adjusting cost estimates and associated funding levels over the storage or surveillance period.

(4) The proposed decommissioning plan must include --

(i) The choice of the alternative for decommissioning with a description of activities involved. An alternative is acceptable if it provides for completion of decommissioning without significant delay. Consideration will be given to an alternative which provides for delayed completion of decommissioning only when necessary to protect the public health and safety. Factors to be considered in evaluating an alternative which provides for delayed completion of

decommissioning include unavailability of waste disposal capacity and other site-specific factors affecting the licensee's capability to carry out decommissioning, including the presence of other nuclear facilities at the site.

(ii) A description of the controls and limits on procedures and equipment to protect occupational and public health and safety;

(iii) A description of the planned final radiation survey;

(iv) An updated cost estimate for the chosen alternative for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning; and

(v) A description of technical specifications, quality assurance provisions and physical security plan provisions in place during decommissioning.

(5) If the decommissioning plan demonstrates that the decommissioning will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public, and after notice to interested persons, the Commission will approve, by amendment, the plan subject to such conditions and limitations as it deems appropriate and necessary. The approved decommissioning plan will be a supplement to the Safety Analysis report or equivalent.

(6) The Commission will terminate the license if it determines that--

(i) The decommissioning has been performed in accordance with the approved decommissioning plan, and

(ii) The terminal radiation survey and associated documentation demonstrates that the facility and site are suitable for release.

(c) For a facility that has permanently ceased operation before the expiration of its license, the collection period for any shortfall of funds will be determined, upon application by the licensee, on a case-by-case basis taking into account the specific financial situation of each licensee.

29. Section 50.91, the introductory text is revised to read as follows:

§ 50.91 Notice for public comment; State consultation.

The Commission will use the following procedures for an application requesting an amendment to an operating license for a facility licensed under § 50.21(b) or § 50.22 or for a testing facility, except for amendments subject to hearings governed by §§ 2.1201-2.1263 of this chapter. For amendments subject to §§ 2.1201-2.1263 of this chapter, the following procedures will apply

only to the extent specifically referenced in § 2.1205(c) and (d) of this chapter:

* * * * *

30. Section 50.111, paragraph (b) is revised to read as follows:

§ 50.111 Criminal penalties.

* * * * *

(b) The regulations in 10 CFR Part 50 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 50.1, 50.2, 50.3, 50.4, 50.8, 50.11, 50.12, 50.13, 50.20, 50.21, 50.22, 50.23, 50.30, 50.31, 50.32, 50.33, 50.34a, 50.35, 50.36b, 50.37, 50.38, 50.39, 50.40, 50.41, 50.42, 50.43, 50.45, 50.50, 50.51, 50.52, 50.53, 50.56, 50.57, 50.58, 50.81, 50.90, 50.91, 50.92, 50.100, 50.101, 50.102, 50.103, 50.109, 50.110, 50.111.

31. Appendix I to 10 CFR Part 50 is amended by revising Section (I), the introductory text of Section (IV), and Section (IV)(C) to read as follows:

Appendix I to Part 50 - Numerical Guides for Design Objectives and Limiting Conditions of Operation to Meet the Criterion "As Low As Is

Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents.

SECTION I. *Introduction.* Section 50.34a provides that an application for a permit to construct a nuclear power reactor shall include a description of the preliminary design of equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal conditions, including expected occurrences. In the case of an application filed on or after January 2, 1971, the application must also identify the design objectives, and the means to be employed, for keeping levels of radioactive material in effluents to unrestricted areas as low as practicable.

Section 50.36a contains provisions designed to assure that releases of radioactive material from nuclear power reactors to unrestricted areas during normal conditions, including expected occurrences, are kept as low as practicable.

* * * * *

SECTION IV. *Guides on technical specifications for limiting conditions for operation for light-water-cooled nuclear power reactors licensed under 10 CFR Part 50.* The guides on limiting conditions for operation for light-water-cooled nuclear power reactors set forth

below may be used by an applicant for a license to operate a light-water-cooled nuclear power reactor or a licensee who has submitted a certification of permanent cessation of operations under § 50.82(a)(1) as guidance in developing technical specifications under § 50.36a(a) to keep levels of radioactive materials in effluents to unrestricted areas as low as is reasonably achievable.

Section 50.36a(b) provides that licensees shall be guided by certain considerations in establishing and implementing operating procedures specified in technical specifications that take into account the need for operating flexibility and at the same time assure that the licensee will exert his best effort to keep levels of radioactive material in effluents as low as is reasonably achievable. The guidance set forth below provides additional and more specific guidance to licensees in this respect.

Through the use of the guides set forth in this Section it is expected that the annual release of radioactive material in effluents from light-water-cooled nuclear power reactors can generally be maintained within the levels set forth as numerical guides for design objectives in Section II.

At the same time, the licensee is permitted the flexibility of operations, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even under unusual conditions which may temporarily result in releases

higher than numerical guides for design objectives but still within levels that assure that the average population exposure is equivalent to small fractions of doses from natural background radiation. It is expected that in using this operational flexibility under unusual conditions, the licensee will exert his best efforts to keep levels of radioactive material in effluents within the numerical guides for design objectives.

* * * * *

C. If the data developed in the surveillance and monitoring program described in paragraph B of Section III or from other monitoring programs show that the relationship between the quantities of radioactive material released in liquid and gaseous effluents and the dose to individuals in unrestricted areas is significantly different from that assumed in the calculations used to determine design objectives pursuant to Sections II and III, the Commission may modify the quantities in the technical specifications defining the limiting conditions in a license to operate a light-water-cooled nuclear power reactor or a license whose holder has submitted a certification of permanent cessation of operations under § 50.82(a)(1).

* * * * *

PART 51--ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING
AND RELATED REGULATORY FUNCTIONS

32. The authority citation for Part 51 continues to read as follows:

AUTHORITY: Sec. 161, 68 Stat. 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953, (42 U.S.C. 2201, 2297f); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853-854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95-604, Title II, 92 Stat. 3033-3041; and sec. 193, Pub. L. 101-575, 104 Stat. 2835 42 U.S.C. 2243).

Sections 51.20, 51.30, 51.60, 51.80. and 51.97 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100-203, 101 Stat. 1330-223 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036-3038 (42 U.S.C. 2021) and under Nuclear Waste Policy Act of 1982, sec 121, 96 Stat. 2228 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also under Nuclear Waste Policy Act of 1982, sec 114(f), 96 Stat. 2216, as amended (42 U.S.C. 10134(f)).

* * * * *

33. Section 51.53, paragraph (b) is revised to read as follows:

§ 51.53 Supplement to environmental report.

* * * * *

(b) *Post Operating License Stage.* Each applicant for a license amendment authorizing decommissioning activities for a production or utilization facility either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license amendment approving a license termination plan or decommissioning plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license or license amendment to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor shall submit with its application the number of copies, as specified in § 51.55, of a separate document, entitled "Supplement to Applicant's Environmental Report--Post Operating License Stage," which will update "Applicant's Environmental Report--Operating License Stage," as appropriate, to reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), the applicant shall only address the environmental impact of spent fuel storage for the term of the license

applied for. The "Supplement to Applicant's Environmental Report--
Post Operating License Stage" may incorporate by reference any
information contained in "Applicant's Environmental Report--
Construction Permit Stage," "Supplement to Applicant's Environmental
Report--Operating License Stage," final environmental impact
statement, supplement to final environmental impact statement--
operating license stage, or in the records of decision prepared in
connection with the construction permit or the operating license for
that facility.

* * * * *

34. Section 51.95, paragraph (b) is revised to read as follows:

§ 51.95 Supplement to final environmental impact statement.

* * * * *

(b) *Post Operating License Stage.* In connection with the
amendment of an operating license authorizing decommissioning
activities at a production or utilization facility covered by § 51.20,
either for unrestricted use or based on continuing use restrictions
applicable to the site, or with the issuance, amendment or renewal of
a license to store spent fuel at a nuclear power reactor after
expiration of the operating license for the nuclear power reactor, the
NRC staff will prepare a supplemental environmental impact statement

for the post operating license stage or an environmental assessment, as appropriate, which will update the prior environmental review. The supplement or assessment may incorporate by reference any information contained in the final environmental impact statement, the supplement to the final environmental impact statement--operating license stage, or in the records of decision prepared in connection with the construction permit or the operating license for that facility. The supplement will include a request for comments as provided in § 51.73. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a supplemental environmental impact statement for the post operating license stage or an environmental assessment, as appropriate, will address the environmental impacts of spent fuel storage only for the term of the license, license amendment or license renewal applied for.

Dated at Rockville, Maryland, this
____ day of _____ 1996.

For the Nuclear Regulatory Commission.

John C. Hoyle,

Secretary of the Commission.