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General Comment

PSEG Nuclear comments on NRC Proposed Decommissioning Rule

Attachments

PSEG Nuclear comments on NRC Proposed Decommissioning Rule 8-30-22



August 30, 2022

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

Subject: Comments on Proposed Rule "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning," 87 FR 12254, dated March 3, 2022, Docket ID NRC-2015-0070

PSEG Nuclear LLC (PSEG) is pleased to offer comments on the NRC's proposed rule, for which the stated goals are to maintain a safe, effective, and efficient process for decommissioning, reduce the need for license amendment requests and exemptions from existing regulations, address other decommissioning issues deemed relevant by the NRC, and support the NRC's Principles of Good Regulation, including openness, clarity, and reliability. In large part, the NRC's proposed amendments to its regulations accomplish these objectives, and PSEG appreciates the NRC staff's rigorous, thoughtful, and commendable efforts to develop the proposed rule. However, a number of the proposed changes warrant further clarification or revision.

PSEG supports the comments on this proposed rule that the Nuclear Energy Institute (NEI) is concurrently submitting on behalf of the nuclear industry, and has been actively engaged with NEI in preparing those comments. To supplement NEI's comments, additional comments on the proposed rule are provided in Attachment 1, and responses to specific requests for comments are provided in Attachment 2.

Respectfully,

David J. Mannai
Executive Director, Regulatory Affairs & Nuclear Oversight
PSEG Nuclear LLC

Attachments as described

Attachment 1: Comments on the Proposed Rule

PSEG Nuclear LLC (PSEG) submits these comments on the NRC's proposed rule, "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning," dated March 3, 2022 (87 FR 12254), Docket ID NRC-2015-0070, herein referred to as the "Proposed Rule."

PSEG's comments are intended to supplement the comments the Nuclear Energy Institute (NEI) is concurrently submitting on behalf of the nuclear industry, which PSEG supports. Although some comments may reference 10 CFR Part 50 and not Part 52, this is not intended to imply that they do not apply to both, as applicable.

Environmental Considerations

- 1. Comment: The provisions in §§ 51.53(d) and 51.95(d) for an application to store spent fuel at a nuclear power reactor after expiration of the reactor operating license appear to no longer be needed and should be removed or their intended applicability clarified.**

Discussion: Changes to §§ 51.53(d) and 51.95(d) appear to be warranted to reflect the 1996 decommissioning final rule (61 FR 39278, July 29, 1996) change to § 50.51 to specifically address the continued effectiveness of expired power reactor licenses and licensee actions during the continued effectiveness period that include maintaining the facility and the spent fuel.¹ This change eliminated the need for individual applications to authorize storing spent fuel at a nuclear power reactor after expiration of the operating license, for which provisions to §§ 51.53(d) and 51.95(d) were added by the disposition of spent fuel final rule (49 FR 34688, August 31, 1984), with other changes to Part 51 to complement the Waste Confidence Decision (49 FR 34658, August 31, 1984).

The statement of considerations for the disposition of spent fuel final rule discusses the expectation that storage of spent fuel at a reactor beyond the expiration of its license will require an amendment to the Part 50 license for "possession only" of the reactor and spent fuel or authorization under Part 72 for an ISFSI (see 49 FR 34689).

While § 50.51 addressed the continued effectiveness of a Part 50 license, it did not replace the specific Part 50 facility license and technical specifications (61 FR 39287). Numerous technical specification changes were expected to continue to be needed for the transition to decommissioning to obtain relief from operating reactor requirements.²

¹ The NRC has proposed separate changes to §§ 51.53(d) and 51.95(d) to reflect that the 1996 final rule also eliminated the requirement for power reactor licensees to request NRC approval of decommissioning plans and authorization for decommissioning, see page 12292 of the Federal Register notice.

² License amendment requests have typically been submitted to revise the Part 50 facility license and technical specifications for a permanently defueled reactor (Level 1 in the graded approach), and also for permanent removal of spent fuel from the spent fuel pool once all spent fuel is in dry storage (Level 3).

Spent Fuel Management Planning

- 1. Comment: NRC guidance for funding spent fuel management should be updated to reflect current conditions with respect to recovering spent fuel management costs from the Department of Energy (DOE).³**

Discussion: Draft guidance⁴ for funding spent fuel management consists of a reference to NUREG/CR-5884 and NUREG/CR-6174, reports issued in 1995 and 1996 which contain outdated information with respect to licensees recovering spent fuel management expenses from the DOE.

Recent reports issued by the DOE's Office of Inspector General⁵ and the U.S. Government Accountability Office⁶ describe the current conditions regarding federal liabilities for the management of commercial spent nuclear fuel. The Court of Appeals for the Federal Circuit has held that the DOE's failure to begin accepting spent nuclear fuel in 1998 constituted a partial breach of contract,⁷ resulting in federal liabilities for spent fuel management costs. The majority of the types of liable costs pertain to dry storage of spent fuel, and have included costs for ISFSI construction and spent fuel canisters. As of September 30, 2021, approximately \$9 billion in judgments and settlements for damages related to the partial breach⁸ have been paid by the Judgment Fund,⁹ and the DOE estimates the remaining liability at \$30.9 billion, based on its settlement estimates.

Despite the fact that a considerable portion of the spent fuel dry storage costs at reactor sites is a liability of the U.S. Government, as reflected in the DOE's settlement estimates, annual § 50.82(a)(8)(vii) reports submitted by licensees typically take no credit for recovering spent fuel management costs from the DOE, and instead rely on an approved or planned exemption to show excess amounts in the decommissioning trust fund (DTF) as funds "accumulated" for these costs. For § 50.54(bb) submittals, licensees have also typically relied on an approved or planned exemption, while reimbursements from DOE may be credited as an additional or potential source of funds. However, NRC safety evaluations have noted that DOE reimbursements have become "more consistent and predictable" in recent years.¹⁰

³ Similar comments are provided under "Decommissioning Trust Fund" in Attachment 2.

⁴ DG-1347 Revision 1, Proposed Revision 2 to Regulatory Guide 1.184, "Decommissioning of Nuclear Power Reactors," February 2022 (ML21347A080), see Section C.3 "Irradiated Fuel Management Plan"

⁵ DOE's Office of Inspector General report on DOE's Nuclear Waste Fund's Fiscal Year 2021 financial statement audit, DOE-OIG-22-08, November 2021

⁶ U.S. Government Accountability Office report, Commercial Spent Nuclear Fuel, Congressional Action Needed to Break Impasse and Develop a Permanent Disposal Solution, GAO-21-603, September 2021

⁷ Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste, 10 CFR Part 961 Subpart B

⁸ \$6.5 billion to settling utilities that collectively own 81 percent of the nuclear reactors subject to litigation for partial breach of contract and \$2.5 billion in damages awarded by trial court.

⁹ The Department of the Treasury's Judgment Fund is a permanent, indefinite appropriation for the payment of judgments against the United States, see 31 U.S.C. § 1304.

¹⁰ Examples include NRC safety evaluations for license transfers involving Crystal River Unit 3, April 4, 2020 (ML20101G579), and Kewaunee Power Station, March 31, 2022 (ML22014A387)

2. **Comment:** In proposed § 50.54(bb)(1), the provision related to decommissioning appears to be redundant or potentially conflict with existing regulations in § 50.82 and Part 72 and therefore should be deleted. To the extent proposed §§ 50.54(bb)(1) and (2) would require site-specific reviews of activities associated with a general license ISFSI, they are apparently inconsistent with the general license provisions in Part 72 and should be withdrawn.

Discussion: In reference to the second sentence in proposed § 50.54(bb)(1), relocated from § 72.218(a), decommissioning activities that would eliminate the capability to remove the spent fuel from the site prior to termination of the license authorizing its storage are prohibited by § 50.82(a)(6), since this would both foreclose release of the site for unrestricted use and result in significant environmental impacts not previously reviewed. In addition, a licensee for an ISFSI must comply with the terms and conditions of the Part 72 license and applicable NRC regulations, therefore this requirement creates regulatory uncertainty since it is not clear what is being authorized. For example, systems and components needed for § 72.122(l) ready retrieval, as it relates to the removal of spent fuel from the site, must continue to be maintained until after principal activities at the ISFSI have ceased. Recognizing that multiple means are available to licensees to conduct activities associated with unloading spent fuel from a storage cask and into a transportation cask, this sentence could be interpreted by licensees as unnecessarily restricting activities that may otherwise be allowed under § 50.59 or § 72.48 without prior NRC approval.

For a general license ISFSI, decommissioning is carried out as part of the reactor facility. Under 1996 decommissioning rules (61 FR 39278, July 29, 1996), NRC approval and authorization of specific decommissioning activities is not required, and this would logically extend to a general license ISFSI. Under the 1988 decommissioning rules (53 FR 24018, June 27, 1988) that were in effect when § 72.218 was added to the regulations, *then* § 50.82(d) allowed detailed plans to be submitted for NRC approval later, prior to the start of these activities, and would have reasonably applied to an ISFSI needed to continue storing spent fuel.

For a specific license ISFSI, decommissioning is carried out under Part 72 regulations. § 72.54(d) does not require a detailed decommissioning plan to be submitted for NRC review until 12 months after notification of permanent cessation of principal activities at the ISFSI, after all spent fuel has been removed. Since a specific licensee cannot be required to comply with two differing requirements on the same subject, the proposed § 50.54(bb)(1) requirement relocated from § 72.218 should not apply to a specific license ISFSI to the extent that it requires a detailed decommissioning plan.

The final rule that established the general license provisions in Part 72 (55 FR 29181, July 18, 1990), set forth rules authorizing the use of NRC approved spent fuel storage casks at reactor sites “without the need for additional site-specific approvals to the maximum extent practicable,” under the directives of the Nuclear Waste Policy Act.¹¹ If § 72.218, as included in the general license provisions, had been intended to require

¹¹ Nuclear Waste Policy Act of 1982, as Amended, Pub. L. 97-425, January 7, 1983

additional site-specific NRC approvals, that would have contradicted an objective of the rule and should have been prominently discussed in the statement of considerations. More plausibly, the purpose of § 72.218 is as described in the statement of considerations for the final rule that addressed the applicability of Part 72 sections (65 FR 50606, August 21, 2000):

“Section 72.218 relies upon requirements contained in Part 50 which are adequate to ensure that spent fuel is disposed of properly and that decommissioning is completed so that the license may be terminated.”

This summary appears to be consistent with the statement of considerations for the final rule that implemented the general license provisions (55 FR 29181, July 18, 1990), and as contemplated in its proposed rule (54 FR 19379, May 5, 1989), that clarifies the Part 50 facility license cannot be terminated while spent fuel is stored under the general license. This requirement has no clear connection with detailed descriptions of spent fuel management activities conducted in accordance with the license while spent fuel is being stored at the ISFSI prior to the transfer to DOE. To the extent the draft guidance¹² issued with the Proposed Rule would require detailed descriptions of systems and components, it should be withdrawn.

It is respectfully suggested that the information required for an IFMP submittal remain consistent with the NRC staff's criteria for historical reviews.¹³ If those criteria remain appropriate, they should be included in the guidance.

3. Comment: Clarification is needed for IFMP submittal requirements applicable to spent fuel stored in an ISFSI in compliance with Part 72.

Discussion: § 50.54(bb) was amended in 1994 to address the notifications of spent fuel management and funding plans for prematurely shut down power reactors. The statement of considerations for the final rule (59 FR 10267; March 4, 1994) stated that since Part 72 contains provisions to ensure adequate funds to construct, operate, and decommission ISFSIs, *“Spent fuel management and funding plans submitted in compliance with the amended § 50.54(bb) need not cover spent fuel while it is stored in an ISFSI in compliance with Part 72”* (page 10268). This statement should be clarified.

Emergency Preparedness

1. Comment: The NRC staff has proposed an organized and flexible set of regulations that establish a clear process for a licensee to evaluate changes to its emergency plan under the graded approach. Furthermore, the proposed change process is well-suited to accommodate changes needed for a multi-reactor site transitioning to decommissioning.

¹² DG-1347 Revision 1, Proposed Revision 2 to Regulatory Guide 1.184, “Decommissioning of Nuclear Power Reactors,” February 2022 (ML21347A080), Section C.3 “Irradiated Fuel Management Plan”

¹³ For example, refer to the criteria listed in NRC safety evaluation dated May 11, 2022 (ML22089A049)

2. **Comment:** In accordance with § 50.155(a)(2)(i), wide-range spent fuel pool (SFP) level monitoring is not required once the reactor is permanently defueled, therefore emergency action levels (EALs) for decommissioning facilities should not rely on this capability.

Discussion: Draft Regulatory Guide DG-1346 Revision 1 EAL schemes for the post-shutdown emergency plan (PSEP) and the permanently defueled emergency plan (PDEP) rely on wide-range SFP level monitoring.¹⁴

§ 50.155(e) requires wide-range SFP level monitoring capability so that decision-makers can effectively prioritize mitigation and recovery actions for events that could challenge both the spent fuel stored in a SFP and fuel in the reactor core. Once the reactor is permanently defueled, i.e., § 50.82(a)(1) certifications docketed, prioritization of actions is no longer necessary since the focus would be on the spent fuel pool condition, and in accordance with § 50.155(a)(2)(i) compliance with § 50.155(e) is no longer necessary. This condition corresponds to Level 1 in the graded approach.

For a licensee that has *not* docketed the § 50.82(a)(1) certifications, § 50.155(e) allows that wide-range SFP level monitoring is not required if all the fuel in a SFP has decayed for at least 5 years. In that condition, the decay heat in the SFP is sufficiently low that decision-makers would similarly not have to prioritize actions, and conversely the focus would be on fuel in the reactor core. This condition is not applicable to EALs for decommissioning facilities, since the graded approach itself is predicated on docketing the § 50.82(a)(1) certifications.

Imposing these requirements through the EAL schemes for decommissioning facilities when the regulations provide relief once the reactor is permanently defueled would add a burden on licensees to maintain this capability with no significant safety benefit.

3. **Comment:** The term “hostile action” in EALs for PDEP and ISFSI-only emergency plan (IEOP) should be replaced with “security-based event” or similar.

Discussion: Hostile action does not apply to PDEP (and thus also IOEP) as discussed in the Proposed Rule.¹⁵ However, DG-1346 uses the term “hostile action” in a number of PDEP and IOEP EALs for the purpose of classifying security-based events and to distinguish event classification levels.¹⁶ This creates regulatory uncertainty with respect to what enhancements to emergency preparedness in response to hostile action are expected to be addressed by a licensee or offsite response organization in order to

¹⁴ In DG-1346 Appendix A, Attachments 1 and 2, PSEP and PDEP EALs for DU2 and DA2 rely on wide-range SFP level monitoring, indicated by use of the defined terms Level 1, Level 2, and Level 3. These definitions refer to Order EA-12-051, which was rescinded and made generically applicable at § 50.155(e) by the Mitigation of Beyond-Design-Basis Events final rule (84 FR 39684, August 9, 2019).

¹⁵ For example, “PDEP Emergency Classification Levels and Emergency Action Levels” on page 12274 of the Federal Register notice, states hostile action and hostile-action-based EALs are excluded for a PDEP.

¹⁶ In DG-1346 Appendix A, the term “Hostile Action” is used in Attachment 2 PDEP EALs DU3, DA3, and DA4, and EU1 and EA1 (for ISFSI), and Attachment 3 IOEP EALs EU1 and EA1.

meet the intent of these EALs, and how it might differ for different classification levels.¹⁷ This is compounded by the lack of distinction between “hostile action” EALs for PDEP and IOEP and those for PSEP, for which hostile-action based events are not excluded.

4. **Comment:** **In accordance with § 50.54(hh)(2), the requirement to maintain procedures for potential aircraft threat does not apply to permanently shutdown facilities, therefore EALs for decommissioning facilities should not rely on this.**

Discussion: §§ 50.54(hh)(1) and (2) require potential aircraft threat procedures to be maintained until the § 50.82(a)(1) certifications are submitted.¹⁸ However, DG 1346 includes EALs with the terms “aircraft threat” and “aircraft attack” and also uses those terms, in part, to determine the event classification level.¹⁹ The bases for these EALs describe site-specific procedures and actions necessary to prepare the plant and staff, which also creates regulatory uncertainty concerning which procedures would continue to be required to meet the intent of these EALs, since they are no longer required by the regulations.

Decommissioning EALs necessary to address the underlying concerns should instead rely on requirements that remain applicable, such as the § 50.155(b)(2) extensive damage mitigation strategies for events involving loss of large areas of the facility, which would facilitate the training of personnel and avoid regulatory uncertainty.

¹⁷ For PDEP (and IOEP), enhancements to emergency preparedness in response to hostile action, such as alternative facilities and protective actions for personnel, no longer apply, and no action from offsite response organizations would be expected or required other than firefighting, law enforcement, and ambulance/medical services – see “Offsite Radiological Emergency Response Plans” section on page 12273 of the Federal Register notice.

¹⁸ Supplement to SECY-16-0142, Draft Final Rule - Mitigation of Beyond-Design-Basis Events, February 22, 2017 (ML17045A163) states: “Once the licensee permanently removes the fuel from the reactor, the licensee will be in the same situation as the then-decommissioning reactors at the time of the issuance of Order EA-02-026, ‘Interim Safeguards and Security Compensatory Measures,’ when the NRC concluded that potential aircraft threat procedures for decommissioning reactors were not warranted.”

¹⁹ In DG-1346 Appendix A, “aircraft attack” or “aircraft threat” is used in Attachment 1 PSEP EALs DU3, DA3, DS3, and EU1 and EA1 for an ISFSI, Attachment 2 PDEP EALs DU3, DA3, and EU1 and EA1 for an ISFSI, and Attachment 3 IOEP EALs EU1 and EA1.

Attachment 2: Responses to Specific Requests for Comments

PSEG Nuclear LLC (PSEG) submits these responses to specific requests for comments in the NRC's proposed rule, "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning," dated March 3, 2022 (87 FR 12254), Docket ID NRC-2015-0070, herein referred to as the "Proposed Rule," as shown on pages 12302 to 12304 in the Federal Register notice.

PSEG's responses on the topics listed below are intended to supplement the responses the Nuclear Energy Institute (NEI) is concurrently submitting on behalf of the nuclear industry, which PSEG supports.

- *PSDAR Approval*
- *Financial Assurance*
- *Site-Specific Cost Analysis*
- *Decommissioning Trust Fund*

Although some responses may reference 10 CFR Part 50 and not Part 52, this is not intended to imply that they do not apply to both, as applicable.

PSDAR Approval

As part of this rulemaking, should the NRC require approval of the PSDAR, a site-specific environmental review, and hearing opportunity before a licensee undertakes any decommissioning activity? Other than NRC review and approval of the PSDAR, are there other activities that could help to increase transparency and public trust in the NRC regulatory framework for decommissioning? Should the rule provide a role for the states or local governments in the process? What should that role be? What are the advantages or disadvantages of various roles? Please provide an explanation for your response.

PSEG Response:

The statement of considerations for the 1996 decommissioning final rule (61 FR 39278, July 29, 1996), in the response to comments section (pages 39283 to 39286), comprehensively addressed a number of issues and questions raised during that rulemaking that are substantially similar to questions asked here, including:

- "*Issue 5 – Environmental Impact Considerations During the Initial Phase of Decommissioning,*" discusses how the final rule prohibits site-specific activities that could result in significant environmental impacts not previously reviewed.
- "*Issue 6 – Public Participation,*" describes the purpose of the PSDAR to inform the public and provide a forum to hear public views, the role of state and local governments, and the more formal public participation process established for license termination.
- "*Issue 8 – Court Decision,*" clarifies the NRC's decision to allow licensees to perform certain activities without an NRC-approved decommissioning plan.

These discussions should continue to be relied upon as the bases for the decommissioning rules for the PSDAR submittal and associated requirements, and as a starting point for considering any relevant issues not previously raised.

Financial Assurance

What are the advantages and disadvantages of updating the formula to reflect recent data and to cover all estimated radiological decommissioning costs rather than the bulk of the costs?

PSEG Response:

A significant site-specific factor for estimating decommissioning costs at a multi-reactor site is the coordination of decommissioning projects. The minimum formula amount, and the previous independent study documented in SECY-13-0066, appear to only consider standalone decommissioning facilities. This would tend to result in the formula amount overestimating actual decommissioning costs by not accounting for the economies of scale and improved efficiencies expected to be realized through the coordination of decommissioning projects, based on past experiences. Effective coordination could be expected to reduce overall costs by a magnitude comparable to the differences in applying an updated formula.¹ Use of a “bounding” formula amount that does not consider this factor would likewise tend to overestimate costs, all other factors being equal. However, licensees should not be expected to prematurely develop the detailed decommissioning plans for coordinated projects necessary to support site-specific cost estimates, as discussed in the following response.

Site-Specific Cost Analysis:

What are the advantages and disadvantages of requiring a full site investigation and characterization at the time of shutdown?

PSEG Response:

Requirements for current operating facilities implemented by the decommissioning planning final rule (76 FR 35512, June 17, 2011) and previous changes have significantly reduced the likelihood that any new and significant information would be identified at the time of shutdown. Furthermore, at a site with multiple nuclear power reactors, full site investigation and characterization may be impractical until site-wide reactor operations have ceased.

Radiological data obtained at the time of shutdown would have limited or questionable use for predicting the effects on radiation release criteria many years or decades in the future. Likewise, potential contamination identified at the time of shutdown cannot be reliably used to determine potential impacts on site remediation or the total decommissioning costs.

¹ SECY-13-0066 described an average increase for pressurized water reactors of 6.8 percent, and an average decrease of 15.4 percent for boiling water reactors.

What are the advantages and disadvantages of eliminating the formula and requiring a site-specific cost estimate during operations?

PSEG Response:

Properly accounting for the coordination of decommissioning projects for co-located reactors, which creates significant opportunities to achieve economies of scale through integrated scheduling, coordination of activities, and more efficient use of staffing and contractor resources, requires extensive planning. Detailed decommissioning plans necessary to support site-specific cost estimates for coordinated projects that are developed many years or decades before actual decommissioning would be subject to significant revisions to account for changing circumstances, such as license renewal, and the usefulness and accuracy of premature plans and cost estimates would be limited.

Significant planning resources could be expended in this way without adding to the reasonable assurance that sufficient funds will be available for decommissioning when needed, as provided by using the formula. During reactor operations, using the formula is significantly more efficient and should continue to be relied upon until site-specific decommissioning cost estimates are required in accordance with the current regulations, i.e., about 5 years before expected cessation of operations.

Decommissioning Trust Fund:

Under the NRC's existing regulations and this proposed rule, the amounts set aside for radiological decommissioning should not be used for the maintenance and storage of spent fuel in the spent fuel pool, or for the design or construction of spent fuel dry storage facilities, or for other activities not directly related to the long-term storage, radiological decontamination or dismantlement of the facility, or decontamination of the site.

Should the NRC's regulations allow decommissioning trust fund assets to be used for spent fuel management if (1) there is a projected surplus in the fund based on a comparison to the expected costs identified in a site-specific cost estimate and (2) the assets are returned to the fund within an established period of time? What are the advantages and disadvantages of allowing decommissioning trust fund assets to be used for those purposes? What are the advantages and disadvantages of allowing decommissioning trust fund assets to be used for non-radiological site restoration prior to the completion of radiological decommissioning?

PSEG Response:

The NRC staff's recommended amendments to the regulations² addressing the historical need for exemptions to use excess amounts in the decommissioning trust fund (DTF) for spent fuel management costs was not approved by the Commission, in part, due to

² SECY-18-0055, Proposed Rule: Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning," Enclosure 1, pages 130 to 135

“numerous options” available to fund those activities.³ These options included recovering spent fuel management expenses from the DOE through litigation or settlement agreements, the use of subaccounts in the DTF, and requesting an exemption from NRC regulations on a case-by-case basis.

Recovering spent fuel management expenses from the DOE

NRC guidance on funding for spent fuel management should be updated to reflect the current conditions and appropriately and consistently consider recovering spent fuel management costs from the DOE through litigation or settlement agreements.

In the statement of considerations for the decommissioning planning final rule (76 FR 35512, June 17, 2011) that added the §§ 50.82(a)(4)(i) and (a)(8)(vii) reporting requirements for spent fuel management costs and funding, the NRC stated: “*The extent to which the DOE may be responsible for onsite spent fuel storage costs is an issue that is outside the scope of this rulemaking.*”

The ability of licensees to recover these costs from the DOE was cited among the reasons for not moving forward with the NRC staff’s recommended changes, therefore the extent of the federal government’s liability should already be considered within the scope of this Proposed Rule. Inadequate guidance for taking appropriate credit for this as a source of funds then places licensees in a difficult position. Draft guidance⁴ for funding spent fuel management consists of a reference to NUREG/CR-5884 and NUREG/CR-6174, reports issued in 1995 and 1996 which provide outdated information with respect to licensees recovering spent fuel storage costs from the DOE.

Recent reports issued by the DOE’s Office of Inspector General⁵ and the U.S. Government Accountability Office⁶ describe the current conditions regarding federal liabilities for the management of commercial spent nuclear fuel. The Court of Appeals for the Federal Circuit has held that the DOE’s failure to begin accepting spent nuclear fuel in 1998 constituted a partial breach of contract,⁷ resulting in the federal liabilities. A majority of the types of liable costs pertain to dry storage of spent fuel, e.g., spent fuel canisters and ISFSI construction. As of September 30, 2021, approximately \$9 billion in judgments and settlements for damages related to the partial breach⁸ have been paid by the Judgment Fund,⁹ and the DOE estimates the remaining liability at \$30.9 billion, based on its settlement estimates.

³ VR-SECY-18-0055 (Hanson), August 10, 2021 (ML21230A315)

⁴ DG-1347 Revision 1, Proposed Revision 2 to Regulatory Guide 1.184, “Decommissioning of Nuclear Power Reactors,” February 2022 (ML21347A080), see Section C.3 “Irradiated Fuel Management Plan”

⁵ DOE’s Office of Inspector General report on DOE’s Nuclear Waste Fund’s Fiscal Year 2021 financial statement audit, DOE-OIG-22-08, November 2021

⁶ U.S. Government Accountability Office report, Commercial Spent Nuclear Fuel, Congressional Action Needed to Break Impasse and Develop a Permanent Disposal Solution, GAO-21-603, September 2021

⁷ Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste, 10 CFR Part 961 Subpart B

⁸ \$6.5 billion to settling utilities that collectively own 81 percent of the nuclear reactors subject to litigation for partial breach of contract and \$2.5 billion in damages awarded by trial court.

⁹ The Department of the Treasury’s Judgment Fund is a permanent, indefinite appropriation for the payment of judgments against the United States, see 31 U.S.C. § 1304.

Despite the fact that a considerable portion of the spent fuel dry storage costs at reactor sites is a liability of the U.S. Government, as reflected in the DOE's settlement estimates, the annual § 50.82(a)(8)(vii) reports submitted by licensees typically take no credit for this, and instead rely on an approved or planned exemption to show excess amounts in the DTF as funds "accumulated" for these costs. For § 50.54(bb) IFMP submittals, licensees have also typically relied on exemptions, while reimbursements from DOE may be credited as an additional potential source of funds. However, NRC safety evaluations have noted that DOE reimbursements have become "more consistent and predictable" in recent years.¹⁰

Establishing subaccounts in the DTF to fund spent fuel management activities

Additional NRC guidance should be provided for acceptable means to establish and fund separate subaccounts in the DTF for spent fuel management activities, in accordance with the existing regulations.

Previous NRC rulemaking¹¹ and guidance¹² have clarified that the NRC regulations do not prohibit separate subaccounts in the DTF for other activities including spent fuel management, if the minimum amounts are maintained for radiological decommissioning and the licensee is able to identify and account for those funds. However, as stated in the regulatory basis document¹³ for this Proposed Rule, the "*majority of licensees plan to request exemptions instead of specifically identifying the use of funds greater than those required for 10 CFR Part 50 decommissioning in their DTFs.*"

Lacking effective guidance, the majority of licensees have continued to report funds accumulated for spent fuel management as part of the amount of funds reported for radiological decommissioning, which then may not be reallocated for other purposes without an approved exemption.¹⁴

¹⁰ Examples include NRC safety evaluations for license transfers involving Crystal River Unit 3, April 4, 2020 (ML20101G579), and Kewaunee Power Station, March 31, 2022 (ML22014A387)

¹¹ Decommissioning of Nuclear Power Reactors, final rule, 61 FR 39278, July 29, 1996, see page 39285

¹² Regulatory Issue Summary 2001-07, Revision 1, "10 CFR 50.75 Reporting and Recordkeeping for Decommissioning Planning," January 8, 2009 (ML083440158)

¹³ Regulatory Improvements for Power Reactors Transitioning to Decommissioning, Regulatory Basis, 82 FR 55954, November 20, 2017 (ML17215A010), see Appendix F, Decommissioning Funding Assurance

¹⁴ Licensees should continue to have the option to request exemptions under the existing § 50.12 criteria.