SUMMARY OF PUBLIC MEETING
TRIENNIAL UPDATES OF THE DECOMMISSIONING FUNDING PLAN
SEPTEMBER 16, 2016

1. Background

The final version of a Decommissioning Planning Rule (herein referred to as the Rule) was published in the *Federal Register* on June 17, 2011 (Refs. 1 and 2). The final Rule became effective on December 17, 2012, after the major fuel cycle facilities had submitted triennial updates of the Decommissioning Funding Plan (DFP) as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 70.25(e)(2)[a]. The next updates were to be submitted in calendar year 2015.

By letter dated June 27, 2016, the Nuclear Energy Institute (NEI) discussed industry reservations on the manner in which the staff at the U.S. Nuclear Regulatory Commission (NRC) were implementing the Rule. NEI requested a public meeting with the NRC staff to discuss the issues raised by the letter.

As requested by NEI, a public meeting was held on September 16, 2016, at the Headquarters of the NRC in Rockville, MD. The meeting had been noticed on the NRC public website. Both a conference call and webinar had been established for members of the public to participate. The meeting was portrayed as a Category 2 meeting to obtain views from the regulated community and other stakeholders; the public could discuss issues at designated points in the meeting. Principle participants at the meeting are as follows:

NRC	NEI
John Tappert[(a)]	Janet Schlueter[(h)]
Andrea Kock[(b)]	Nima Ashkeboussi[(i)]
Craig Erlanger[(c)]	
Christepher McKenney[(d)]	
Kenneth Kline[(e)]	
Robert Johnson[(f)]	
Christopher Ryder[(g)]	

Notes
a. Director, Division of Decommissioning, Uranium Recovery, and Waste Programs
b. Deputy Director, Division of Decommissioning, Uranium Recovery, and Waste Programs
c. Director, Division of Fuel Cycle Safety, Safeguards, and Environmental Review
d. Branch Chief, Performance Assessment Branch
e. Technical Reviewer, Performance Assessment Branch
f. Branch Chief, Fuel Manufacturing Branch
g. Licensing Project Manager
h. Senior Director, Radiation and Materials Safety
i. Senior Project Manager, Radiation and Materials Safety

[a] 10 CFR 70.25(e)(2) requires, in part, that at the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination.

2. NEI Perspective on DFP Reviews

The Rule is broad, affecting many types of licensees. The subject of the letter dated June 27, 2016, on the impact to the fuel cycle licensees.

Abrupt Shutdown

The NRC staff wants decommissioning costs be estimated given that an abrupt shutdown occurs at a fuel cycle facility. A licensee simply walks away from their site, leaving the NRC staff to have a third-party contractor decommission. This supposition is not realistic, is not implied by the new rule, and it is not in NRC staff guidance (Ref. 4). Hence, the basis for the supposition is unclear. Title 10 of the *Code of Federal* Regulations (10 CFR) Section 70.38 implies an orderly shutdown. The abrupt shutdown supposition sets an undesirable precedence.

The inventory of special nuclear material (SNM) is not a burden or waste. The inventory is a well-managed asset. A licensee determines when decommissioning begins and will not enter into decommissioning when inventory is present on the site. Furthermore, an unlicensed contractor is not authorized, and would be unable to, operate proprietary equipment and processes SNM to remove the inventory. Licensee employees will not abandon a site; they will be unemployed and desire work at the site.

SNM Inventory

Neither the 2011 Rule nor NRC staff guidance (Ref. 4) support the assertion that decommissioning funds, (rather than operational funds) must be used to remove SNM inventory. The Rule codifies aspects of NRC staff guidance (Ref. 4). Prior to the Rule becoming effective, the NRC staff approved DFPs where a supposition was made that the SNM inventory had been removed prior to decommissioning.

NRC Reviews of DFPs

The NRC staff needs to be more disciplined in performing their reviews of DFPs. Reviews have sometimes occurred over long durations from unnecessary requests for additional information (RAIs) being asked multiple times and in unnecessary detail. Both the context of the requested information and regulatory basis is needed for each RAI. Some RAIs convey a sense of needing assurance instead of asking for specific information to complete a Safety Evaluation Report (SER). RAIs should be asked for information, not for license commitments. The communications between the NRC staff and licensee should be improved to facilitate the review process; not all information needs to be obtained by the formal RAI process.

3. NRC Perspective

Decommissioning Funding Plan

Financial assurance has two parts, the DFP and the mechanism for funding. The purpose of the Decommissioning Planning Rule (Rule) (Ref. 1) is to prevent future legacy sites. Some sites of former nuclear facilities have become a public liability. The sites are fenced because

decommissioning cannot be funded by a license, leaving contamination in amounts that preclude release for unrestricted use. These sites were licensed in the 1950s under 10 CFR Part 30 and 10 CFR Part 40. Planning had not been done for decommissioning.

The Rule requires that which has been stated only in NRC staff guidance (Ref. 4). For example, although an application had been approved for an increase in possession limits, the DFP had not been revised to address how the possession limits were covered. Nonetheless, with NRC authorization, the license brought SNM onto their site. Paragraph 70.25(e)(2)(v)[b] of 10 CFR, requires the triennial update of the DFP to account for the increase in the authorized possession limits.

A DFP is a document that is kept current with updates at least triennially. A premise of the DFP is that the state of a facility is routine operations. Thus, the costs are not for the worst case (maximum inventory) or the best case (no inventory) at the time of decommissioning.

The Rule improves transparency in how the NRC staff bases decisions for approving a DFP. A State agency had inquired with the NRC staff about an increase in the possession limits when a license was being approved for an increase in the limits. Regulations require detailed reporting of financial assurance mechanisms and the means of protecting committed funds in cases of financial distress. The Rule specifically discusses financial distress.

Abrupt Shutdown

Decommissioning occurs when a facility is closed. From the experience of the NRC staff, interest in a closed facility wanes, even when decommissioning activities need to be done. A plan is needed prior to closing to ensure that sufficient funds exist.

SNM Inventory

The NRC staff has worked with several licensees to justify the key assumption of how the SNM inventory will be dispositioned. Three groups of SNM inventory were delineated — customer-owned, licensee-owned, and SNM in the fuel manufacturing process (that is, in-process SNM).

Contingency Factor

As stated in the *Federal Register* (Ref. 2), the contingency factor is to address unforeseen technical situations that increase the cost of decommissioning. Typically, the contingency factor covers increases in costs that can occur between triennial updates of the DFP and unexpected contamination of soil or groundwater. The contingency factor is not for foreseeable, anticipated, or expected aspects of decommissioning.

[b] 10 CFR 70.25(e)(2)(v) states in part, that the decommissioning funding plan must update the information submitted with the original or prior approved plan, and must specifically consider the effect of changes in authorized possession limits.

Funding Mechanisms

Regulations state methods that a licensee can use to provide financial assurance. By itself, operating funds is not a mechanism. A licensee seeking to base financial assurance on operating funds are afforded guarantee methods stated under 10 CFR Part 30 Appendix A[c], C[d], D[e] and E[f]. The guarantees utilize financial tests to demonstrate coverage of a company liabilities including decommissioning. In this way, the public has reasonable assurance that a nuclear facility will not become a legacy site.

NRC Reviews of DFPs

NRC has a goal of reviewing a DFP in 6 months, but acknowledged that the latest round of DFP have not been achieving that goal. Part of the detailed technical review of a DFP is RAIs. The NRC staff attempts to limit the number of RAIs. For many reasons, the resources of the NRC staff have been challenged. Experience shows that the first time that licensees must comply with a new regulation, iterations are needed between the NRC staff and licensees to convey expectations and address details. One licensee stated that while two DFPs had been submitted (one in 2013 and one in 2016) since the Rule became effective, the latest review was approximately 8 times more expensive than the first even though few changes had occurred. The NRC staff did not have specific information at the time of the meeting to respond.

4. Roundtable Discussion

SNM Inventory

Licensees stated that many places in the regulations (e.g., 10 CFR 70.38[g]) refer to removing contamination and residual radioactivity during decommissioning. The manner in which the NRC staff is applying this concept to inventory quantities of SNM is unclear. An increase in the possession limits may correspond to increase production, with increased amounts of waste and residual contamination. The ambiguity is in an SNM inventory that is not related to production increases and not related to waste and residual contamination. A licensee would not enter decommissioning with an inventory of SNM.

The NRC staff stated that a site has to be decommissioned with the goal of unrestricted use. A site will not be released as such when SNM inventory is on site. In the context of financial assurance, NRC does not distinguish between SNM inventory and waste. Paragraph

[c] Appendix A to Part 30 — Criteria Relating to Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning.

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

[e] Appendix D to Part 30 — Criteria Relating To Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Commercial Companies That Have no Outstanding Rated Bonds.

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

[g] 10 CFR 70.38(d) requires, in part that within 60 days of the occurrence stated events (e.g., license has expired, licensee has decided to permanently cease principal activities), the NRC is to be notified and either begin decommissioning its site that contains residual radioactivity for release in accordance with NRC requirements.

70.25(e)(2) of 10 CFR, requires a DFP be updated at the time of license renewal or triennially, specifically considering:

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

The NRC staff agrees that licensees typically do not enter decommissioning with an SNM inventory on the site. Financial assurance is to assure that funds will be available for decommissioning in the event that a licensee is in financial distress. Costs, including those associated with 10 CFR 70.25(e)(2), can be excluded from the DFP with a sufficient reason.

The NRC staff and licensees delineated three types of SNM inventory — customer-owned SNM, licensee-owned SNM, and SNM in-process. Licensees have been able to demonstrate that they have a plan to remove the three types of SNM inventories that is not based on the value of the SNM. As such, the associated costs were excluded from the DFP. For example, one licensee has a planned pathway in place, which is an export license for routine shipments to another one of its facilities in Europe; the receiving facility pays for all costs of shipment of UF_6 cylinders from their domestic facility. The NRC staff determined that removing in-process SNM may be part of shutdown activities and is consistent with reducing the likelihood of additional contamination. For customer-owned UF_6 cylinders, the customer has legal title and the licensee has agreements in place for the customer to cover packaging, loading and shipping the inventory (in other situations, as the customer has legal title, the customer could be legally held responsible for removing the UF_6 cylinders).

The NRC staff stated that the cost estimate should be determined for “typical” operations, not as a licensee approaches the time of their intended decommissioning. As the time of intended decommissioning approaches, a licensee may taper operations, reducing the SNM inventory, and begin to decontaminate areas. But financial assurance is for an unexpected or premature closure that may occur for many reasons, such as financial distress.

NRC Reviews of DFPs

NEI staff has a concern for the cumulative effects of the manner in which the NRC staff conducts their reviews. Licensee have limited resources; the efforts spend in addressing the RAIs as such is detracting from operations and safety. The NRC staff acknowledged that RAIs should state the regulatory basis for requesting information. Improvements need to be made in communicating the context of and regulatory basis for the RAIs. The rule was proposed and implemented to prevent additional legacy sites. The NRC staff often sends draft RAIs to a licensee prior to issuing to ensure that the RAIs are understood. Also, licensee often send draft responses to the NRC staff to ensure that the responses will meet their expectations.

Licensees stated that the reasoning of the NRC staff in asking RAIs is not transparent. The NRC staff has asked RAIs about aspects of a DFP that were previously questioned, even though little changed from one submittal to the next. The reason for asking at least some RAIs is unclear. For example, a DFP stated the amount of waste in terms of volume; the NRC staff asked about the dimensions of the volume. As such, RAIs results in an unnecessarily amount of time to review a DFP; a review of an Integrated Safety Analysis (ISA) on a new process can take six months while a review of a DFP can take several years. The licensee have real overhead costs in addressing such RAIs, yet NRC fees continue to increase.

The NRC staff acknowledged that improvements can be made in the review process. Reviews of DFPs follow the review process for routine submittals; the acceptance for a detailed technical review occurs over 45 days; the technical review occurs over 150 days. Nonetheless, extenuating circumstances arise, leaving the NRC staff with no other choice but to extend a review period.

The NRC staff stated that, though costs are not explicitly considered, they look for efficient ways to conduct their reviews of the DFPs. The purpose of the RAIs is to ask for missing information needed of complete and document a technical review. Then NRC staff has calls with the licensees to convey understandings of RAIs and expectations of responses to RAIs. Regarding the comment on asking for dimensions, the NRC staff was confirming the volume figures.

Third-Party Contractor

Licensees stated that determining costs, supposing that a third-party contractor will decommission, is unreasonable. A third-party contractor could not operate equipment that is not their own. The NRC staff stated that the supposition of a third-party contractor is required for estimating costs included in the decommissioning cost estimate.[h]

Inconsistent NRC Staff Reviews

A licensee stated an experience where three DFPs had been submitted to the NRC from three facilities. The reviews were completed in 10 months. As part of a renewal application of another facility, a DFP was submitted. Three sets of RAIs were issued in draft form. No comments or discussion occurred with the licensee for months. Eventually, the licensee had to resubmit the triennial update before the previous DFP had been approved.

In February 2012, a triennial update of the DFP was submitted to the NRC. The submittal did not account for the SNM inventory. In March 2016, the license decided to cease operations and the NRC was notified. This is the closest example of a walk-away scenario that has occurred. Nonetheless, operating funds were used to remove the SNM inventory with employees who had appropriate security clearance. The licensee had to address both decommissioning contaminated areas and security clearance. The NRC staff supposition of a sudden shutdown without operating funds to remove the SNM inventory is unrealistic.

[h] 10 CFR 70.25(e)(1)(i)(A) states that a decommissioning funding plan must be submitted for review and approval and must contain a detailed cost estimate for decommissioning, in an amount reflecting the cost of an independent contractor to perform all decommissioning activities.

Licensees stated that in previous DFPs, the disposition of the SNM was not an issue. An assumption was made that the SNM inventory would be removed prior to decommissioning. The DFP was approved. Now, this same assumption is no longer acceptable. Disposition of the SNM inventory is pushed into the decommissioning. Considering SNM that is in the fuel manufacturing process as being dispositioned by a third-party contractor is unrealistic; contractors will be unable to operate equipment that is proprietary and sometimes classified.

One licensee stated that they did not realize the ramifications of the Rule in regards to the disposition of SNM inventory. The industry would have been more vocal about the disposition of SNM when the Rule was published for comment. The expectations of the NRC staff regarding the disposition of SNM inventory is tantamount to rulemaking.

Suggestions for Improving Reviews

Licensee suggested that the NRC staff visit the fuel cycle sites prior to issuing RAIs. In this way, at least some RAIs would be unnecessary. The NRC staff agrees. Site visits are done for reviews of other applications in performing a technical review and documenting the review in an SER. By the same reasoning, site visits should be done for reviews of DFPs. NRC staff in the Office of Nuclear Reactor Regulations (NRR) are making changes in their review process. Both NRR and the Office of Nuclear Material Safety and Safeguards (NMSS) could share best-practices.

Guidance is needed from the NRC staff to discuss expectations. Guidance in the form of 10 CFR 70.25(e)(ii) listing eight items that need to be addressed would be useful; DFPs could be written to address each of the eight items of the regulation. If no changes had been made since the previous DFP, then a statement in the submittal as such would be written, thus, precluding RAIs. The NEI staff suggested either an Information Notice or Interim Staff Guidance. Also, documentation in some form about lessons-learned may be of use to licensees.

The NRC staff agreed that some form of guidance that is parallel to 10 CFR Part 70.25(e)(e)(ii) would be beneficial. Licensees would know the information that is expected. Reviews by the NRC staff would be facilitated.

5. Closing Remarks

The NEI staff requested that the NRC respond to their letter dated June 27, 2016. A response from the NRC staff would inform licensees when they prepare their next DFPs. Communication regarding RAIs should continue, licensees may ask questions at any time. The NRC staff should make every effort to adhere to review schedules.

The NRC staff acknowledged the candid feedback of the DFP reviews. The NRC agreed on a response to the NEI letter and to develop Interim Staff Guidance to support future DFP submittals and reviews. The expectations will be communicated in an improved manner. Licensees are encouraged to communicate with the licensing project managers.

6. References

1. Memorandum from R. W. Borchardt, U.S. Nuclear Regulatory Commission, to the Commission, “Final Rule: Decommissioning Planning (10 CFR Parts 20, 30, 40, 50, 70, and 72; RIN-3150-AI55)”, SECY-09-0042, March 13, 2009. ADAMS accession number ML090500566.

2. Federal Register / Vol. 76, No. 117, June 17, 2011. Pages 35512 through 35575.

3. Letter from J. Schlueter, Nuclear Energy Institute, to C. Erlanger, U.S. Nuclear Regulatory Commission, and J. Tappert, U.S. Nuclear Regulatory Commission, “Required Triennial Update of the Decommissioning Funding Plan”, June 27, 2016. ADAMS accession number ML16229A172.

4. U.S. NRC, “Consolidated Decommissioning Guidance: Financial Assurance, Recordkeeping, and Timeliness, Final Report” NUREG-1757, Vol. 3, Rev. 1, February 2012. ADAMS accession number ML12048A683.