



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 21, 2015

Rodney J. McCullum
Director of Used Fuel Programs
Nuclear Energy Institute
1201 F Street NW, Suite 1100
Washington, DC 20004

SUBJECT: RESPONSE TO SEPTEMBER 23, 2014, NUCLEAR ENERGY INSTITUTE
SUBMITTAL: NEI 14-03, "GUIDANCE FOR OPERATIONS-BASED AGING
MANAGEMENT FOR DRY CASK STORAGE," REVISION 0

Dear Mr. McCullum:

In response to your letter dated September 23, 2014, staff from the Office of Nuclear Material Safety and Safeguards, Division of Spent Fuel Management completed its review of Nuclear Energy Institute (NEI) 14-03, "Guidance for Operations-Based Aging Management for Dry Cask Storage," Revision 0 (Agencywide Document Access Management System Accession No. ML14266A224). NEI requested that the U.S. Nuclear Regulatory Commission (NRC) endorse this guidance in the update of NUREG-1927, "Standard Review Plan for Renewal of Spent Fuel Dry Cask Storage System Licenses and Certificates of Compliance." We appreciate the opportunity to review and comment on this guidance.

The staff finds significant value in some aspects of NEI 14-03, specifically, those related to the ongoing evaluation of operating experience, and will consider referencing those portions of NEI 14-03 in NUREG-1927. In particular, we support the use of "tollgates" to periodically assess the effectiveness of aging management activities as well as the creation of an operating experience clearinghouse to share data across the industry. Such efforts support our common goal of creating an operations-focused approach to aging management, in which inspection results drive both immediate corrective actions as well as broader changes to aging management activities to make them more effective.

Other aspects of NEI 14-03 require further discussion before the guidance can be considered for endorsement in its entirety. Recent reviews of license renewal applications and the development of the NUREG-1927 update have shaped our position regarding how NEI 14-03 can most effectively complement the NRC guidance. First, additional direction in NEI 14-03 on the application format, content, and operating experience evaluation processes could provide needed clarity. Second, some aspects of the guidance may be either unclear or appear to be in conflict with NRC positions. A summary of our comments in these areas are summarized below.

1. Application Format and Content. Section 4.2, "Application Format and Content," provides an overview of the basic components of the application; however, it does not provide a level of detail beyond that anticipated to be given in the NUREG-1927 update. We believe that

the guidance for each of the main sections of the application (e.g., Scoping Evaluation, Aging Management Review) would benefit from a description of the amount of detail and technical justification needed, how information is to be organized, and how the applicant's proposal is to be cross-referenced to NUREG-1927 to highlight any differences from staff recommendations. The NRC refers to the NEI guidance for power reactor license renewal, NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule," as an example where detailed guidance on format and content has resulted in consistent presentations of information from application to application and a minimization of requests for additional information to address fundamental information gaps.

2. Sharing of Operating Experience. Section 3.5, "Aggregation and Dissemination of Age-Related Operating Experience and Other Information," describes the key objectives for sharing operating experience across the industry. We consider this topic to be a cornerstone of effective aging management and support NEI's effort to initiate this process. NEI 14-03 presents this topic at a conceptual level only, and we believe that this restricts the usefulness of the guidance. It is unclear from NEI 14-03 what organization will maintain the operating experience "clearinghouse," how licensees will contribute to and access the clearinghouse (including those that are not members of the Institute of Nuclear Power Operations), what role the Certificate of Compliance (CoC) holders will have, and what process and criteria will be used by the clearinghouse owner to proactively "push" operating experience out to the industry and make it available to the NRC.
3. Tollgates. Section 2.6.5, "Tollgate Assessment," describes a process to periodically self-assess the effectiveness of aging management activities (AMAs). We find significant value in the tollgate concept, as it can provide a means to use site-specific and industry operating experience to either confirm the effectiveness of current AMAs or prompt changes to address deficiencies. We believe that the tollgate guidance should include details on establishing specific performance criteria (e.g., the establishment of program-specific performance indicators for each of the 10 aging management program (AMP) elements). We also note that NEI has been developing related guidance for power reactors in NEI-XX, "Aging Management Program Effectiveness," (ML14211A438). In addition, we believe that the guidance should be clarified to ensure that tollgate reports will be available for NRC inspection, as the results of these assessments can play a critical role in maintaining NRC's awareness of emerging aging issues.
4. Change Control of Aging Management Information. Section 4.2, "Application Format and Content," refers to the license or CoC containing only "high-level" information as conditions, while revisions to AMPs and time-limited aging analyses (TLAAs) are controlled by the incorporation of their summary information into the Updated Final Safety Analysis Report (consistent with Part 50 power plant AMPs). We believe that this guidance places undue emphasis on restricting the content of licensing conditions. Unlike power plants, dry cask storage systems lack a large base of ongoing inspections, performance monitoring activities, and operating experience on aging. As a result, in order to reach its reasonable assurance finding that aging effects will be adequately managed, the NRC will continue to use license and CoC conditions as necessary to tie down certain aging management activities.
5. Lead System Inspections. Section 2.6.2, "Storage System Inspections," describes the inspections to be performed before the submittal of the license renewal application. The guidance describes options for (1) not performing such an inspection before the

submittal of the application, and (2) the use of a surrogate – i.e., using the inspection results of a system at another site to justify not performing a lead system inspection. Regarding the first option, we believe that more detail needs to be provided on the technical justification required for not performing a lead system inspection prior to submitting the application. Regarding the second option, we believe that specific-license renewals should not refer to inspections conducted at other sites as a surrogate for its lead system inspection, given the limited operating experience. While the use of surrogate inspections for CoC renewals that cover multiple sites may be justified, the guidance should provide detail on the criteria for determining appropriate surrogates.

6. AMP and TLAA Discussions. We believe that some portions of the guidance on AMPs and TLAAAs could introduce confusion. First, aging management programs are variously described as “AMPs,” “high-level, programmatic AMPs,” and “implementation AMPs.” The use of these three terms gives the impression that there are three types of aging management programs, rather than three ways of describing a single program (albeit with different levels of detail). Second, NEI 14-03 describes TLAAAs as being developed at the time of the renewal application (Sections 1.1. 2.4, 2.5). By definition, TLAAAs are calculations or analyses that are contained or incorporated by reference in the design bases. As such, applicants must *identify* existing analyses and demonstrate that they remain valid, can be projected forward, or whether the aging effect will be managed with an AMP. Given the potential unfamiliarity of some applicants with the subject of TLAAAs, it is the staff’s view that the guidance should include information on how to identify TLAAAs, including examples, and the level of technical detail needed to justify their disposition.

The NRC will likely issue a draft of NUREG-1927, Revision 1, for public comment prior to a possible endorsement of NEI 14-03. As a result, NEI may also wish to consider NUREG-1927, Revision 1 in any revisions to NEI 14-03 to address the above feedback.

If you have questions regarding our comments, please contact John Wise. He can be reached at (301) 287-3585. If you are interested in discussing the review in a public meeting, please propose a meeting date and Dr. Wise will coordinate the meeting. We look forward to continuing this constructive dialog.

Sincerely,

/RA/

Mark D. Lombard, Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

cc: Kristopher Cummings, NEI

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ADAMS Accession No: ML15013A201

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