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August 18, 2016

Ms. Cindy Bladey
Chief
Rules, Announcements, and Directives Branch (RADB)
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Industry Comments on Consideration of Rulemaking to Address Prompt Remediation of Residual Radioactivity During Operations, NRC Docket ID NRC-2011-0162, *Federal Register 43959 Vol. 81*, July 6, 2016

Project Number: 689

Dear Ms. Bladey:

The Nuclear Energy Institute (NEI)[1] is pleased to provide these comments on the U.S. Nuclear Regulatory Commission (NRC) staff's consideration of a potential rulemaking to address prompt remediation of residual radioactivity during operations. The NRC is seeking additional input from various stakeholders on the need for this potential rulemaking in response to Commission direction provided in the staff requirements memorandum for SECY-13-0108.[2] We appreciated the public meeting held on July 11, 2016, during which industry and State representatives and others provided their perspectives on this rulemaking. While we value the opportunity to interact with the staff on this subject, this letter does not explicitly address the specific questions contained in the July 6, 2016 Federal Register Notice (FRN) because they are almost identical to those contained in the July 18, 2011 FRN (76FR42074). NEI provided detailed responses to the July 2011 FRN questions in our September

[1] NEI is responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory, financial, technical and legislative issues. NEI members include all companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

[2] "Staff Requirements – SECY-13-0108 – Staff Recommendations for Addressing Remediation of Residual Radioactivity During Operations," December 20, 2013.

16, 2011 letter. Our prior position that the current regulatory framework is adequate to address the need for remediation during operation, and that no additional rulemaking is necessary in this area, remains unchanged.

Industry Position

As reflected in our comments during the July 2016 public meeting and in our September 16, 2011 and August 2, 2013 letters on two previous iterations of the Draft Technical Basis,[3] NEI believes that the rulemaking being contemplated has significant regulatory and policy implications. Further, we also observe that the NRC's own proposals for addressing cumulative effects suggests that the "regulatory basis stage may be the optimal point in the rulemaking process to apply a [Cumulative Effects of Regulation] template, to assist in evaluating whether issuing a proposed rule is the appropriate action.[4] Fundamentally, that is what the Commission requested in 2012 when it directed the staff to examine "the pros and cons of moving forward with a proposed prompt remediation rulemaking including the staff's initial analysis of whether the cost/benefit analysis satisfies the backfit requirements."[5] It remains NEI's position that performance of those evaluations and analyses, consistent with the proper framing of the issue, would reveal that this effort would not result in a substantial safety increase, and would, in fact, unjustifiably burden both industry and the NRC at a time when resources are better spent on efforts that will result in a substantial safety benefit. Further, more than three years of operational experience from implementation of the final Decommissioning Planning Rule (DPR), which became effective in December 2012, does not demonstrate the need to develop additional rulemaking prescribing remediation during operations. NRC resources should not be expended to continue this effort since the regulatory framework in place today is more than adequate and no significant safety or security issue relevant to current licensees has been identified. Additionally, as will be discussed further, current industry practices adequately address the need to perform site remediation during operation.

Background

By way of background, neither of the previously issued versions of the draft Technical Basis supported a rulemaking requiring prompt remediation during operations because the analysis contained in those documents: (1) assumed that a rulemaking is required, rather than meaningfully assessing the need for new requirements; (2) failed to identify a concrete generic issue that requires resolution via the contemplated rulemaking; and (3) failed to adequately address the backfit implications of the contemplated rulemaking, despite Commission direction to do so. Our earlier letters provide extensive detail regarding the basis for our position on these matters. Since that time, we are not aware of any additional programmatic information or data that addresses these concerns; and, given the absence of such information, we continue to believe that development of a proposed rule would be wholly inappropriate and a poor use of limited resources.

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[3] *See* NEI (R. Andersen) Letters to NRC (C. Bladey), "Comments on the Consideration of Rulemaking to Address Prompt Remediation of Residual Radioactivity During Operations (Docket ID NRC-2011-0162,)" Sept. 16, 2011 and August 2, 2013.

[4] *See* SECY-12-0137, at 4.

[5] "Staff Requirements – SECY-12-0046 – Options for Revising the Regulatory Approach to Ground Water Protection," May 24, 2012.

Current Framework is Adequate

Most importantly, industry remains firmly committed to continuing to plan, fund, and conduct safe and efficient facility operations and decommissioning. This work includes minimizing, detecting, monitoring and managing contamination during operations and decommissioning to reduce exposures and minimize generation of radioactive wastes. We firmly believe that current NRC regulations contain appropriate and adequate requirements to facilitate this goal and prevent legacy sites. NRC staff agrees, stating in the draft technical basis, that "no legacy sites have occurred since institution of financial assurance rules in 1987" and that "no power reactors have been legacy sites."[6] The NRC's existing regulations require licensees to, among other things: 1) comply with regulatory dose limits for individual members of the public and environmental radiation standards contained in Part 20 (e.g., §20.1301); 2) control licensed material to minimize the introduction of residual radioactivity into the site including the subsurface (§20.1406(c)); 3) perform site surveys and monitoring activities to evaluate potential radiological hazards of residual activity including the subsurface (§20.1501(a)); and 4) keep records important to decommissioning including areas that might have become contaminated during facility operations (§50.75 and §70.25). In addition, Part 50 technical specifications help ensure control of licensed material, and all licensees implement an As Low As Reasonably Achievable ("ALARA") protection program and adhere to relevant NRC guidance. Further, industry has fully implemented the final DPR, and it continues its comprehensive voluntary Groundwater Protection Initiative (GPI) which NRC has reviewed. Finally, NRC can and does inspect licensee programs to ensure compliance with applicable regulations and we welcome the opportunity to provide and exchange programmatic information.

Groundwater Protection Initiative

In 2006, the commercial nuclear power industry began a voluntary GPI program involving all nuclear power plant operators to improve the management of situations pertaining to radiological releases to groundwater. The details of the program are contained in the document *"Industry Ground Water Protection Initiative: Final Guidance Document," NEI 07-07, August 2007.* One of the primary objectives of the GPI initiative is to establish company/site-specific action plan(s) to help assure timely detection and effective response to situations involving inadvertent radiological releases in groundwater to prevent migration of licensed radioactive material offsite and quantify impacts on decommissioning.

NEI 07-07 contains multiple parameters that demonstrate the industry's commitment to addressing the topic of prompt remediation during operations. First, NEI 07-07 Objective/Acceptance Criteria 1.4 and 1.4.a. state the following, respectively:

- *Establish a remediation protocol to prevent migration of licensed material off-site and to minimize decommissioning impacts.*, and
- *Establish written procedures outlining the decision making process for remediation of leaks and spills or other instances of inadvertent releases.*

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[6] See "DRAFT Technical Basis For Prompt Remediation, Rev. 4", Page 8, April 18, 2013.

The NRC reviewed the industry's completion of the GPI and, thereby, industry's adherence to the above criteria through Temporary Instructions (TI) 2515/173 and 2515/185 "*Follow-up on the Industry's Groundwater Protection Initiative.*" An internal NRC memo dated April 11, 2014, documented that all but one site met this criteria and that this site was addressing the issue at that time.[7]

The commercial nuclear power industry is fully committed to ensuring that actions are taken to assess the need for performing remediation of soil and groundwater. As such in July 2011, the Electric Power Research Institute (EPRI) published the document *Groundwater and Soil Remediation Guidelines for Nuclear Power Plants: Public Edition,* EPRI Report number 1023464, which has proven to be a valuable resource to industry. As stated in the "Results" section of the document:

> "This document provides the guidance necessary to establish a decision making protocol for soil or groundwater remediation at each nuclear power plant site. The remediation evaluation protocol includes remediation objectives, site investigation criteria, and draft site release limits to evaluate the need for remediation in the event of a leak or spill. Considerations that should be included in the decision-making protocol are:
>
> 1. Potential for off-site migration of contamination following an inadvertent release.
> 2. Potential impacts to decommissioning planning and costs, such as increases in contaminated materials requiring disposal at decommissioning.
> 3. Potential to exceed site release criteria at license termination.
> 4. Potential impacts to plant operation and business practices.
>
> The document also provides the information necessary to evaluate remediation options with respect to technical feasibility, safety, and cost in order to determine if remediation is more effective and/or less costly during operation or decommissioning."

Industry will continue its efforts under the GPI, including sharing best practices among the fleet and we have full confidence that its intent is being and will continue to be met.

Fuel Cycle Facility Remediation During Operations

All fuel cycle facilities have programs in place to detect, monitor and safely manage contaminated areas that would potentially need to be remediated either during operations or decommissioning. This includes performing routine site surveys and monitoring activities to evaluate potential radiological hazards of residual radioactivity including the subsurface. For example, routine environmental monitoring at one fuel cycle facility identified the presence of subsurface radioactivity from past operations beneath a portion of an active building. After an initial assessment, additional environmental monitoring and removal of approximately 4,000 cubic feet of material, the excavation of additional subsurface soil became impractical without risking a breach of barriers that contain radioactivity, disrupting operationally essential equipment or

[7] Memorandum from S.M. Garry (Senior Health Physicist, NRC) to U.S. Shoop (Chief, Radiation Protection and Consequences Branch, NRC), "Roll-Up Results of Temporary Instruction 2515/185, 'Follow-Up on the Industry's Ground Water Protection Initiative,'" April 11, 2014.

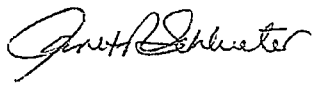
potentially exacerbating the migration of contaminates already present. In this case, the detection, monitoring and remediation efforts were relatively costly to the facility and diverted limited facility resources. Further, we would note that such remediation efforts have not, traditionally, resulted in significantly reduced radiation exposure to workers or members of the public so they are often difficult to justify from a cost-benefit perspective.

In Summary

NRC should discontinue the expenditure of resources to develop a potential rulemaking on prompt remediation during operations in view of the current regulatory framework--including industry's voluntary GPI--and in the absence of any information or data to suggest that a safety issue exists. Further, current financial assurance regulations are sufficient to ensure adequate resources are available to complete decommissioning as demonstrated by nearly 30 years of no new legacy sites. The commercial nuclear industry is fully committed to ensuring that actions are taken to assess the need for performing remediation of soil and groundwater now and in the years to come.

If you have any questions or concerns regarding these comments, please feel free to contact me at (202) 739-8098 or jrs@nei.org or Jerry Hiatt at (202) 739-8171 or jwh@nei.org.

Sincerely,



Janet R. Schlueter

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