

RUSSELL J. BELL
Senior Director, New Plant Licensing

1201 F Street, NW, Suite 1100
Washington, DC 20004
P: 202.739.8087
rjb@nei.org
nei.org



November 19, 2014

Mr. Michael E. Mayfield
Director
Division of Advanced Reactors and Rulemaking
Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Responses to Questions on White Paper on Small Modular Reactor Emergency Planning Zone

Project Number: 689

Dear Mr. Mayfield:

This letter responds to your letter of June 11, 2014, that provided the U.S. Nuclear Regulatory Commission's (NRC's) questions on NEI's white paper, *Proposed Methodology and Criteria for Establishing the Technical Basis for Small Modular Reactor Emergency Planning Zone*. The attached responses are provided to clarify the industry proposed approach and to assist the NRC in their review. The key aspects of these responses were discussed with the NRC staff at a public meeting held on October 28, 2014.

In our letter dated December 28, 2013, we submitted a white paper to define a generic methodology for determining an appropriately sized plume exposure emergency planning zone (EPZ) for small modular reactors (SMRs). The approach is rooted in concepts put forward in SECY 11-0152, including utilization of existing emergency preparedness regulatory framework and dose savings criteria of NUREG-0396 to assure adequate protection of public health and safety. The white paper is intended to serve as a vehicle to define a framework that provides sufficient guidance to SMR developers and applicants as they proceed to develop their design-specific and site-specific technical bases.

While the attached responses provide additional clarity about the approach in the NEI white paper, the approach itself remains unchanged, and thus we have not revised the December 2013 NEI white paper. As identified in response to several NRC questions, additional information will be necessary in order to complete the technical basis for an appropriately sized EPZ for a specific SMR design site. In these cases, responses identify where additional information is expected to be provided by SMR applicants.

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Several NRC questions are related to how the methodology for determining an appropriately sized plume exposure EPZ fits within the broader context of emergency planning for SMRs. As discussed in the attached responses, the industry is planning to develop a generic emergency planning framework for SMRs that provides reasonable assurance of adequate protection of public health and safety. We look forward to meeting with the NRC staff soon to provide more information about this effort.

Potential design certification and combined license applicants support use of the methodology in the NEI white paper and have participated in the development of the attached responses to NRC questions. In fact, SMR designers are already considering the inputs and criteria identified in the proposed methodology in the preparation of their design certification applications. As we expressed during our public meeting on October 28, timely feedback from the NRC on the acceptability of the proposed methodology is important in order to provide regulatory clarity for these ongoing efforts.

If you have any additional questions or require additional information to facilitate the staff's review, please contact Marc Nichol (mrn@nei.org; 202-739-8131) or me.

Sincerely,

A handwritten signature in black ink, appearing to read "RJB", is written over a light gray rectangular background.

Russell J. Bell

Attachment

c: Ms. Deborah A. Jackson, NRO/DARR, NRC
Ms. Anna Bradford, NRO/DARR/ARPB, NRC
Mr. Arlon D. Costa, NRO/ DARR/ARPB, NRC
NRC Document Control Desk