

January 30, 2026

Mr. Jonathan Greives
Acting Director, Division of Advanced Reactors and
Non-Power Production and Utilization Facilities
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Request for NRC Review and Endorsement of NEI White Paper, “Selection of a Seismic Scenario for an EPZ Boundary Determination”

Project Number: 689

Dear Mr. Greives,

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI)¹ hereby submits the attached NEI White Paper, “Selection of a Seismic Scenario for an EPZ Boundary Determination,” to the U.S. Nuclear Regulatory Commission (NRC) for review and endorsement. This document describes a technology-inclusive methodology for the selection of a seismic scenario to use in an analysis for determining the boundary of a plume exposure pathway Emergency Planning Zone (EPZ). An EPZ boundary analysis is required by power reactor applicants choosing to comply with section (g)(2) of 10 CFR 50.33, “Contents of applications; general information,” and § 50.160, “Emergency preparedness for small modular reactors, non-light-water reactors, and non-power production or utilization facilities.” The white paper guidance supplements that found in Regulatory Guide 1.242, “Performance-Based Emergency Preparedness for Small Modular Reactors, Non-Light-Water Reactors, and Non-Power Production or Utilization Facilities.”

The attached version of the white paper, dated January 2026, addresses the NRC staff comments provided to NEI during a public meeting on December 12, 2024 and follow-up clarification calls. The resolution of the staff’s comments in the attached document reflects the discussion in those meetings. A version comparing the current report to the version submitted in May 2024 is also attached to facilitate NRC review. NEI and the

¹ The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI’s members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

nuclear industry view the NRC endorsement of the attached white paper as an important step towards the efficient and predictable licensing of advanced reactor facilities.

The white paper was developed to assist advanced reactor applicants with the preparation of license applications and the NRC staff with their ongoing efforts to create a generic regulatory framework for the review and approval of such applications. In addition, NEI intends to make the paper will be available to all applicants, free of charge. For this reason, we believe that a request for a fee waiver is not necessary to support NRC review and endorsement of the paper.

If you require additional information concerning this request, please contact me or David Young at dly@nei.org or (202) 739-8127.

Sincerely,



Jon Facemire

Senior Project Manager

c: Mr. Michael Orenak, NRR/DANU/UAL1, NRC
Mr. Michael Waters, NSIR/DPR, NRC
Mr. Eric Schrader, NSIR/DPR/POB, NRC
NRC Control Desk

Attachment 1: NEI White Paper, "Selection of a Seismic Scenario for an EPZ Boundary Determination"

Attachment 2: Comparison of "Selection of a Seismic Scenario for an EPZ Boundary Determination" with the May 2024 submittal