

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Wednesday, January 03, 2018 2:36 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Dinh, Thinh; Vettori, Robert; Vera Amadiz, Marieliz
Subject: Request for Additional Information No. 319 RAI No. 9331 (3.4.1)
Attachments: Request for Additional Information No. 319 (eRAI No. 9331).pdf

Attached please find NRC staff's request for additional information concerning review of the NuScale Design Certification Application.

Please submit your technically correct and complete response within 60 days of the date of this RAI to the NRC Document Control Desk.

If you have any questions, please contact me.

Thank you.

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Licensing Branch 1 (NuScale)
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-0546

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Options

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Request for Additional Information No. 319 (eRAI No. 9331)

Issue Date: 01/03/2018

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.04.01 - Internal Flood Protection for Onsite Equipment Failures

Application Section: 3.4.1

QUESTIONS

03.04.01-4

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

In RAI No. 9053, issued on August 12, 2017 (ML17224A024), the staff requested the applicant to justify the assumptions in the internal flooding analysis, which indicates water flow through pipe ruptures are limited to 40 and 30 minutes in the Reactor Building (RXB) and Control Room Building (CRB), respectively. In the response dated October 11, 2017 (ML17284A914), the applicant stated that "These assumptions are based on plant personnel operative walk-downs, the use of plant monitoring equipment, and the use of closed circuit video monitoring systems. The use of the Remote Camera system, Plant-wide Video Monitoring system, and Plant Security system will aid in keeping visuals on many sections of the plant, including high radiation areas. Additionally, the Control Building was assumed to have a shorter leak time because it is a normally occupied structure."

Since timely isolation of ruptured piping depends on more than just prompt detection of leakages, the NRC staff request the applicant to describe any other design features such as the availability and accessibility of isolation valves, limited water volumes, and/or credited actions to isolate ruptured piping. If specific mitigation strategies are to be developed by the COL applicant, provide a COL item as appropriate.