

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Friday, May 26, 2017 4:01 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Karas, Rebecca; Thurston, Carl
Subject: RE: Request for Additional Information No. 34, RAI 8785
Attachments: Request for Additional Information No. 34 (eRAI No. 8785).pdf

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

Please submit your 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.

Gregory Cranston, Senior Project Manager
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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From: Cranston, Gregory

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Request for Additional Information No. 34 (eRAI No. 8785)

Issue Date: 05/26/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 15.06.05 - Loss of Coolant Accidents Resulting From Spectrum of Postulated Piping
Breaks Within the Reactor Coolant Pressure Boundary

Application Section: 15.6

QUESTIONS

15.06.05-1

10 CFR Part 50 Appendix K, I.C.1 - *Break Characteristics and Flow*, requires that a spectrum of possible pipe breaks be considered in the analyses of loss-of-coolant accidents (LOCAs). Section 15.6.5 of the NuScale Design Specific Review Standard states that, “a spectrum of LOCA break sizes is to be evaluated and the limiting break identified through sufficient analyses ...” The applicant indicates in Section 15.6.5.1 of the Final Safety Analysis Report (FSAR) that a spectrum of break sizes were analyzed that were limited to the chemical and volume control system injection and discharge lines, the high point vent line, and the pressurizer spray supply line. NRC staff identified that the reactor vent valves, reactor recirculation valves, and control rod drive mechanism housing were not identified as being considered in the spectrum of possible break locations. This caused NRC staff to question whether the spectrum of pipe-breaks considered in Section 15.6.5 of the FSAR was sufficient to identify the limiting break. NRC staff relies upon the consideration of an adequate spectrum of pipe breaks to establish a finding that the limiting pipe break has been identified. Accordingly, NRC requests that NuScale provide sufficient evidence to justify that a sufficient break spectrum has been considered such that the limiting break size has been identified and that it meets the applicable acceptance criteria.