

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Saturday, August 12, 2017 1:53 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Lupold, Timothy; Tsirigotis, Alexander; Vera Amadiz, Marieliz
Subject: RE: Request for Additional Information No. 177, RAI 9071 (3.12)
Attachments: Request for Additional Information No. 177 (eRAI No. 9071).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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301-415-0546

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Request for Additional Information No. 177 (eRAI No. 9071)

Issue Date: 08/12/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.12 - ASME Code Class 1, 2, and 3 Piping Systems and Piping Components and
Their Associated Supports

Application Section: 3.12

QUESTIONS

03.12-8

10 CFR 52.47 requires the FSAR include a description and evaluation of the SSCs sufficient to permit the understanding of the system design and their relationship to safety evaluations. ASME BPV Section III, mandated by 10 CFR 50.55a, requires that piping be appropriately evaluated for seismic loads. Accordingly, SRP Section 3.9.2.II.2.A(ii), states that an equivalent static load method is acceptable for piping seismic analysis if certain criteria are met.

FSAR Table 1.9-3 shows that FSAR Subsection 3.12.3 is prepared in conformance with SRP 3.12 Subsection II.A. SRP 3.12 Subsection II.A(vi), "Small Bore Piping Method" discusses small bore piping and its methods of evaluation. The NuScale FSAR Section 3.12 has no subsection pertaining to and makes no mention of small bore piping and its methods of evaluation. NuScale FSAR Tier 2, Section 3.12.3.7, "Equivalent Static Load Method," indicates that the equivalent static load method can be used for seismic analysis of piping and it does not differentiate between small bore and large bore piping.

- 1) Revise FSAR Tier 2, Section 3.12.3.7, "Equivalent Static Load Method," to demonstrate that all the criteria in SRP Section 3.9.2.II.2.A(ii) will be met when using the equivalent static load method.
- 2) Identify in the FSAR whether the equivalent static load method for seismic analysis will be used for both large bore and small bore piping and list the ASME classes that it will be used for.
- 3) Provide a definition for the NuScale small bore piping, along with the method and criteria for its design and analysis.