

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Saturday, August 12, 2017 1:47 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Lupold, Timothy; Tsirigotis, Alexander; Vera Amadiz, Marieliz
Subject: Request for Additional Information No. 179, RAI 9073 (3.12)
Attachments: Request for Additional Information No. 179 (eRAI No. 9073).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.

The NRC Staff recognizes that NuScale has preliminarily identified that the response to one or more questions in this RAI is likely to require greater than 60 days. NuScale is expected to provide a schedule for the RAI response by email within 14 days.

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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Created By: Gregory.Cranston@nrc.gov

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Request for Additional Information No. 179 (eRAI No. 9073)

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

03.12-7

GDC 14 requires that the reactor coolant pressure boundary (RCPB) being designed, fabricated, constructed, and tested to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture. NRC Bulletin (BL) 88-08, "Thermal Stresses in Piping Connected to Reactor Cooling Systems," issued June 22, 1988, requests licensees to identify and evaluate the piping systems connected to the RCS susceptible to thermal stratification, cycling, and striping (TASCS) to ensure that the piping will not be subjected to unacceptable thermal stresses.

The operating experience described in the bulletin needs to be incorporated in the design in accordance with 10 CFR 52.47(a)(22). SRP Section 3.12 includes criteria related to this bulletin.

1) The DHRS condensate return piping from the passive condenser penetrates the containment vessel and is routed to the FW piping. It appears that this section of DHRS is not isolable from the FW. When the DHRS is not in operation, this section of DHRS is full with stagnant water at a lower temperature than the FW. Evaluate the DHRS piping for TASCS susceptibility and update the FSAR with the position for the staff to review.