

NuScaleDCRaisPEm Resource

From: Chowdhury, Prosanta
Sent: Monday, May 7, 2018 1:29 PM
To: Request for Additional Information
Cc: Lee, Samuel; Cranston, Gregory; Murray, Demetrius; Mitchell, Matthew; Chereskin, Alexander; NuScaleDCRaisPEm Resource
Subject: Request for Additional Information No. 467 eRAI No. 9382 (10.04.06)
Attachments: Request for Additional Information No. 467 (eRAI No. 9382).pdf

Attached please find NRC staff's request for additional information (RAI) 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.

Prosanta Chowdhury, Project Manager
Licensing Branch 1 (NuScale)
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-1647

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From: Chowdhury, Prosanta

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Options

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Request for Additional Information No. 467 (eRAI No. 9382)

Issue Date: 05/07/2018

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 10.04.06 - Condensate Cleanup System

Application Section:

QUESTIONS

10.04.06-7

Regulatory Basis:

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criteria (GDC) 14 requires assurance that the reactor coolant pressure boundary (RCPB) have an extremely low probability of abnormal leakage, rapidly propagating failure, and of gross rupture. 10 CFR Part 52.47 requires that a standard design certification submitted for approval under 10 CFR Part 52 shall, "contain a level of design information sufficient to enable the Commission ... to reach a final conclusion on all safety questions associated with the design." As described below the staff finds that the NuScale application does not include necessary information for the staff to reach a safety finding.

By letter dated October 17, 2017 (ADAMS Accession No. ML17290B235), the NRC issued request for additional information (RAI) Number 9117, Question 10.04.06-1. This question requested that the applicant provide the Action Level limits for control parameters listed in Final Safety Analysis Report (FSAR) Tables 10.3-3a through d (now includes added Table 10.3-3e). The Action Level limits were requested so that the NRC staff could have reasonable assurance that the water chemistry parameters used to control corrosion and demonstrate compliance with GDC 14, will be followed.

In its response dated December 15, 2017 (ADAMS Accession No. ML17349A838), the applicant stated that, "The site specific chemistry program will contain site operating procedures that will define the parameters, frequencies, limits, Action Levels and responses consistent with the current EPRI [Electric Power Research Institute] PWR [Pressurized Water Reactor] Secondary Water Chemistry Guidelines."

While the staff finds NuScale's response to defer the specification of Action Levels consistent with the EPRI PWR Secondary Water Chemistry Guidelines to the COL applicant to be generally acceptable, the existing combined license (COL) Item 10.3-1 that requires a COL applicant to develop a site-specific water chemistry program does not explicitly include a requirement to institute Action Levels and the associated required actions. In order for the NRC staff to have reasonable assurance that GDC 14 will be met, the staff requires the COL applicant's site-specific water chemistry programs to include the Action Levels and associated required actions. The staff requires this information at the time of the COL application in order to make a safety determination regarding secondary water chemistry and GDC 14. Therefore, the staff requests that COL Item 10.3-1 be revised to explicitly include the specification of Action Levels and the associated required actions, or that a new COL Item be added to address this issue. The staff notes that the wording of COL Item 10.3-1 should not imply that the Action Levels and required actions are the only elements that need to be included in the site-specific chemistry program.