

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Friday, August 31, 2018 9:05 AM
To: Request for Additional Information
Cc: Lee, Samuel; Samaddar, Sujit; Jain, Bhagwat; Tabatabai, Omid; Chowdhury, Prosanta; NuScaleDCRaisPEm Resource
Subject: Request for Additional Information No. 501 eRAI No. 9600 (14.3.2)
Attachments: Request for Additional Information No. 501 (eRAI No. 9600).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.

Hearing Identifier: NuScale_SMR_DC_RAI_Public
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Subject: Request for Additional Information No. 501 eRAI No. 9600 (14.3.2)
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Options

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Request for Additional Information No. 501 (eRAI No. 9600)

Issue Date: 08/31/2018

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 14.03.02 - Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria

Application Section: 14.3.2

QUESTIONS

14.03.02-4

10 CFR 52.47(b)(1), requires that a DC application contain the proposed inspections, tests, analyses, and acceptance criteria (ITAAC) that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a plant that incorporates the design certification is built and will operate in accordance with the design certification, the provisions of the Atomic Energy Act, and the NRC's regulations. Standard Review Plan (SRP), NUREG-0800, Section 14.3, and in particular, Sections 14.3.2 and Appendix C provide guidance in developing design descriptions, figures, and ITAAC for structural related items. SRP acceptance criterion 14.3.2.II.8 regarding external flooding states that for flooding, site parameters are specified that require the maximum flood level and ground water level to be below the finished plant grade level. The staff requested additional information (eRAI number 9004, Question 14.03.02-2, Dated September 25, 2017) to review these issues.

The staff reviewed the applicant's response to eRAI 9004 (ADAMS Accession No. ML173208117) and determined that it in order to support its reasonable assurance finding, the staff requires the following additional information.

1. The applicant's response to eRAI 9004 with regards to finished grade at the truck ramp is not consistent with the proposed FSAR mark-up provided in the response. The applicant in response to eRAI 9004 stated that "There is a truck ramp for the Radwaste Building (RWB) only; there is no truck ramp for the CRB". Also the applicant in response to RAI 8981, Question No. 03.04.02-4, stated that the top of concrete elevation of the CRB tunnel is at elevation 100 ft. finished grade indicating that there is no truck ramp for the CRB tunnel. However, the proposed mark-up to FSAR Sections 3.4.1.4 and 3.4.2.1 state that there is a truck ramp on the south side of the Radwaste Building and the CRB tunnel. The applicant is requested to address and resolve the inconsistency in the response to eRAI 9004 and the FSAR mark-up whether the truck ramp is for the Radwaste Building only.
2. The staff needs further clarification regarding applicant's response to eRAI 9004 with regards to external wall thicknesses for the RXB and CRB below flood level. The staff recognizes that an ITAAC for external wall thickness below flood level for the RXB and CRB is not needed since the thickness of the exterior walls of the RXB and CRB (5 ft. and 3 ft. respectively) are greater than the SRP 14.3.2 acceptance criteria of 0.6 meter (2 ft.); however, it is not clear to the staff if the RXB and CRB wall thickness is a key dimension of the critical sections, which is inspected through the RXB and CRB ITAAC in FSAR Tier 1, Sections 3.11 and 3.13. The applicant is requested to provide clarification.
3. The applicant in its response to eRAI 9004 referred to ITAAC "03.13.01" that is required to verify as-built fire barriers and smoke barriers in the Control Room Building. The applicant is requested to clarify the relevance of ITAAC 03.13.01 to the verification of as-built structural aspects of the Control or the Reactor Building.