

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Friday, July 21, 2017 7:50 AM
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Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Dias, Antonio; Le, Hien; Markley, Anthony
Subject: RE: Request for Additional Information No. 95, RAI 8818
Attachments: Request for Additional Information No. 95 (eRAI No. 8818).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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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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Request for Additional Information No. 95 (eRAI No. 8818)

Issue Date: 07/21/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 09.01.04 - Light Load Handling System (Related to Refueling)

Application Section: DCD Tier 1, Section 3.4 and DCD Tier 2, Section 9.1.4

QUESTIONS

09.01.04-1

10 CFR 52.47(b)(1) requires that a design certification application contain the proposed ITAAC that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Atomic Energy Act of 1954, and the NRC's regulations.

FSAR Tier 2, Section 9.1.4, "Fuel Handling Equipment," states that the fuel handling equipment (FHE) includes the fuel handling machine (FHM), the new fuel jib crane (NFJC) and the new fuel elevator (NFE). However, FSAR Tier 1, Section 3.4, "Fuel Handling Equipment System," provides the principal design description and associated ITAAC only for the FHM. No ITAAC information is provided for the NFJC and the NFE.

The applicant is requested to provide ITAAC information for the NFJC and the NFE in FSAR Tier 1, Section 3.4, or a justification for not to include ITAAC for these two components.

In addition, FSAR Tier 1, Subsection 3.4.1, "Design Description," identifies a main hoist and an auxiliary hoist for the FHM; however, the staff can only find a detailed description of a mast and its associated hoist in DCD Tier 2, Section 9.1.4.

The applicant is requested to address the inconsistency between FSAR Tier 1 and FSAR Tier 2 information about the FHM.

09.01.04-2

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

FSAR Tier 2, Table 9.1.4-1, "Fuel Handling Equipment Design Information," lists design capacity for the new fuel jib crane to be 1000 lbs which is different from that for the new fuel elevator (1200 lbs). Both equipment are used to handle the new fuel assembly.

The applicant is requested to explain the difference in the listed rated capacities.

09.01.04-3

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

In FSAR Tier 2, Subsection 9.1.4.2.2, Major Component Description,” under the heading of “New Fuel Jib Crane,” the applicant states, in part, “ ... [T]he NFJC is comprised of a telescoping jib beam with an underhung trolley and hoist ...” Figure 9.1.4-3, “Jib Crane,” shows the elevation view of the new fuel jib crane (NFJC). The staff cannot recognize the telescoping feature of the jib beam in this figure.

The applicant is requested to address the inconsistency between the text description and crane design details shown in FSAR Tier 2, Figure 9.1.4-3.