

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Friday, July 21, 2017 12:36 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Som, Swagata; Cintron-Rivera, Jorge; Vera Amadiz, Marieliz
Subject: Request for Additional Information No. 98, RAI 8894 (3.11)
Attachments: Request for Additional Information No. 98 (eRAI No. 8894).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.

Gregory Cranston, Senior Project Manager
Licensing Branch 1 (NuScale)
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-0546

Hearing Identifier: NuScale_SMR_DC_RAI_Public
Email Number: 117

Mail Envelope Properties (7b703dfc45f94e53960f27eb2ebaeafb)

Subject: Request for Additional Information No. 98, RAI 8894 (3.11)
Sent Date: 7/21/2017 12:36:16 PM
Received Date: 7/21/2017 12:36:18 PM
From: Cranston, Gregory

Created By: Gregory.Cranston@nrc.gov

Recipients:

"NuScaleDCRaisPEm Resource" <NuScaleDCRaisPEm.Resource@nrc.gov>

Tracking Status: None

"Lee, Samuel" <Samuel.Lee@nrc.gov>

Tracking Status: None

"Chowdhury, Prosanta" <Prosanta.Chowdhury@nrc.gov>

Tracking Status: None

"Som, Swagata" <Swagata.Som@nrc.gov>

Tracking Status: None

"Cintron-Rivera, Jorge" <Jorge.Cintron@nrc.gov>

Tracking Status: None

"Vera Amadiz, Marieliz" <Marieliz.VeraAmadiz@nrc.gov>

Tracking Status: None

"RAI@nuscalepower.com" <RAI@nuscalepower.com>

Tracking Status: None

Post Office: HQPWMSMRS07.nrc.gov

Files	Size	Date & Time
MESSAGE	560	7/21/2017 12:36:18 PM
Request for Additional Information No. 98 (eRAI No. 8894).pdf		91832

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

Request for Additional Information No. 98 (eRAI No. 8894)

Issue Date: 07/21/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.11 - Environmental Qualification of Mechanical and Electrical Equipment

Application Section: 3.11

QUESTIONS

03.11-15

Draft RAI:

In FSAR Part 2, Tier 1, Section 2.8, "Equipment Qualification," and Section 3.14, "Environmental Qualification – Common Equipment," provide ITAACs for qualification of Class 1E electrical equipment located in harsh environment. FSAR Part 2, Tier 1, Section 2.8.1 and 3.14.1 state that the electrical equipment identified in 10 CFR 50.49 are subject to equipment qualification.

10 CFR 52.47(a)(13) requires that the applicant of a standard design certifications to provide the list of electric equipment important to safety that is required by 10 CFR 50.49(d). The applicant or licensee shall prepare a list of electric equipment important to safety covered by 10 CFR 50.49. Equipment important to safety includes, safety-related equipment, nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions, and certain post-accident monitoring equipment. In FSAR Tier 1, ITAAC No. 2 of Table 3.14-2 and ITAAC No. 2 of Table 2.8-2 are described below

No.	Design Commitment	Inspection, Test, Analyses	Acceptance Criteria
2.	The Class 1E electrical equipment located in a harsh environment, including its connection assemblies, withstands the design basis harsh environmental conditions experienced during normal operations, AOOs, DBAs, and post-accident conditions and performs its function for the period of time required to complete the function.	<p>i. A type test or a combination of type test and analysis will be performed of the Class 1E electrical equipment, including its connection assemblies.</p> <p>ii. An inspection will be performed of the Class 1E as-built electrical equipment, including its connection assemblies.</p>	<p>i. An EQ record form exists and concludes that the Class 1E electrical equipment listed in Table 2.8-1, including its connection assemblies, performs its function under the environmental conditions specified in the EQ record form for the period of time required to complete the function.</p> <p>ii. The Class 1E electrical equipment listed in Table 2.8-1, including its connection assemblies, is installed in its design location in a configuration bounded by the EQ record form.</p>

Question:

The staff finds that this ITAAC # 2 only covers safety related equipment (Class 1E) and does not include nonsafety-related electric equipment that could prevent satisfactory accomplishment of safety functions and post-accident monitoring equipment. Based on the information contained in the ITAAC, the staff requests the applicant to provide how the environmental qualification of any equipment important to safety such as nonsafety-related electric equipment and post-accident monitoring equipment, is addressed in ITAACs mentioned above.