



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 6, 2019

MEMORANDUM TO: Samuel S. Lee, Chief
Licensing Branch 1
Division of Licensing, Siting,
and Environmental Analysis
Office of New Reactors

FROM: Cayetano Santos Jr., Project Manager */RA/*
Licensing Branch 1
Division of Licensing, Siting,
and Environmental Analysis
Office of New Reactors

SUBJECT: SUMMARY OF JANUARY 15, 2019, PUBLIC
TELECONFERENCE REGARDING NUSCALE POWER LLC'S
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
8894 IN ITS DESIGN CERTIFICATION APPLICATION

On January 15, 2019, a Category 1 public teleconference was held between the U.S. Nuclear Regulatory Commission (NRC) staff and NuScale Power, LLC (NuScale). The purpose of the meeting was to discuss NuScale's response to Request for Additional Information (RAI) 8894 Question 03.11-15. The meeting notice was posted on the NRC website and is also in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession Number ML18323A470. The Meeting Summary is provided as Enclosure 1 which captures the summary of topics discussed during this teleconference and Enclosure 2 contains the meeting handout. The Meeting Agenda and List of Attendees are provided as Enclosures 3 and 4, respectively.

Docket No. 52-048

Enclosures:
As stated

cc w/encl.: DC NuScale Power, LLC Listserv

CONTACT: Cayetano Santos Jr., NRO/DLSE
301-415-7270

SUBJECT: SUMMARY OF JANUARY 15, 2019, PUBLIC TELECONFERENCE REGARDING
NUSCALE POWER LLC'S RESPONSE TO REQUEST FOR ADDITIONAL
INFORMATION 8894 IN ITS DESIGN CERTIFICATION APPLICATION
DATED: February 6, 2019

DISTRIBUTION:

PUBLIC

LB1 R/F

RidsNroDnrl

SLee, NRO

CSantos, NRO

CSmith, NRO

NKhan, NRR

SRay, NRR

JCintron-Rivera, NRR

TMartinez-Navedo, NRR

RidsOgcMailCenter

RidsRgn2MailCenter

RidsAcrcAcnwMailCenter

DC NuScale Listserv

ADAMS Accession No.:ML19017A153

*via email

NRO-002

OFFICE	DLSE/LB1:PM	DLSE/LB1:LA	DLSE/LB1:PM
NAME	CSantos	CSmith*	CSantos (signed)
DATE	1/17/2019	2/5/2019	2/6/2019

OFFICIAL RECORD COPY

Meeting Summary

Public Teleconference Regarding RAI 8894

January 15, 2019

On July 21, 2017, the staff issued request for additional information (RAI) 8894, Question 03.11-15 (ML17202U683), regarding the inspections, tests, analyses, and acceptance criteria (ITAAC) that verify the qualification of electrical equipment located in a harsh environment. NuScale Power LLC. (NuScale) responded on September 19, 2017 (ML17262B222). On January 10, 2019, the staff provided NuScale with a list of the staff's questions regarding the response (Enclosure 2).

The staff began the teleconference by reviewing the questions posed in Enclosure 2.

Regarding the deletion of the sentence, "The electrical equipment identified in 10 CFR 50.49 as electric equipment are subject to EQ," NuScale stated that it was removed because it was not needed since the environmental qualification program is still a requirement and is discussed in Tier 1, Section 3.11.

A list of all the equipment within the scope of 10 CFR 50.49 is provided in Tier 2, Table 3.11-1. The staff stated that ITAAC should verify that all of this equipment is environmentally qualified. NuScale responded that not all of the equipment listed in Table 3.11-1 rises to the level of requiring an ITAAC for verification and that Tier 1, Table 2.8-1 identifies the equipment to be verified by ITAAC. In its response to a question from the staff, NuScale stated that the criteria used to identify which equipment would be verified by ITAAC is described in the system description of Tier 1, Section 2.8.1.

The staff asked if ITAAC number 2 in Tier 1, Table 2.8-2 verifies Appendix B requirements or environmental qualification requirements. NuScale responded that this ITAAC verifies environmental qualification requirements for those equipment that meet certain criteria.

The staff asked for an explanation of the phrase "augmented equipment qualification design requirement" used in ITAAC number 2 in Tier 1, Table 2.8-2. NuScale responded that this refers to nonsafety-related equipment that NuScale deemed needed additional quality requirements. NuScale will consider revising the wording used to clarify this description. NuScale will also consider clarifying the use of the abbreviation, "EQ" since it could mean equipment qualification or environmental qualification.

The staff stated that the list of equipment in Tier 2, Table 3.11-1 and Tier 1, Table 2.8-2 is different and asked NuScale for a justification of these differences. NuScale stated that it would be willing to explain why some equipment was not included in Tier 1, Table 2.8-2 in response to an RAI but is hesitant to include this explanation as part of the design certification application. The staff will consider whether this explanation should be located in an RAI response or as part of the application. NuScale agreed to provide a supplemental response to RAI 8894.

One of the categories of equipment within the scope of 10 CFR 50.49 is nonsafety-related electric equipment affecting safety functions. The staff asked if the NuScale design contained any equipment in this category and whether this category was the same as nonsafety-related equipment with augmented qualifications. NuScale responded that there is no equipment in this

category but they do have nonsafety-related equipment with augmented qualifications. NuScale clarified that nonsafety-related equipment with augmented qualifications is not the same as nonsafety-related electric equipment affecting safety functions.

Another category of equipment within the scope of 10 CFR 50.49 is certain post-accident monitoring equipment (PAM). The staff asked if the NuScale design contained any equipment in this category. NuScale responded that PAM is not a criterion used to identify equipment needing ITAAC verification but some PAM equipment is verified by ITAAC because of NuScale's augmented qualification requirements.

There was an opportunity for members of the public to provide comments and ask questions. Sarah Fields commented that it would be helpful if the questions provided to NuScale ahead of the meeting were available to the public prior to the meeting. The staff acknowledged that having the questions prior to the meeting would be beneficial. The staff stated that NuScale would be asked to perform a proprietary review of the document and a publicly available version would be made publicly available as part of the meeting summary. In response to a question from Richard McPherson, the staff stated that five NRC staff were participating in this meeting.

Follow-up to RAI 8894

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 52.47(b)(1), “Contents of the application; technical information,” which requires that a DC 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, a facility that incorporates the Design Certification (DC) is built and will operate in conformity with the DC, the provisions of the Atomic Energy Act of 1954, as amended, and the NRC’s rules and regulations.

Section 52.47(a)(13) of 10 CFR, requires that the applicant of standard design certifications to provide the list of electric equipment important to safety that is required by 10 CFR 50.49(d), “Environmental qualification of electric equipment important to safety for nuclear power plants.” 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 (Class 1E) equipment, nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions, and certain post-accident monitoring equipment.

The staff has determined that the applicant, in response to Request for Additional Information (RAI) 8894, Question 03.11-15, did not completely address how the environmental qualification of any equipment important to safety such as nonsafety-related electric equipment and post-accident monitoring equipment. Therefore, the staff requests that the applicant address the following:

- a. The staff reviewed NuScale’s DCA Revision 2, and determined that in response to RAI 9134, Question 14.03.03-7, the applicant deleted the sentence: “The electrical equipment identified in 10 CFR 50.49 as electric equipment are subject to EQ.” from DCA Part 2 Tier 1, Section 2.8.1 and Section 3.14.1 to clarify that these sections are associated with equipment qualification and not solely environmental qualification. By removing the reference to 10 CFR 50.49, how does the applicant verify mechanical and electrical equipment that are subject to 10 CFR 50.49, are environmentally qualified and that the ITAAC meets the requirement of 10 CFR 52.47(a)(13)?
- b. The staff reviewed DCA Part 2 Tier 2, Table 3.11-1, “List of Environmentally Qualified Electrical/I&C and Mechanical Equipment Located in Harsh Environments,” to verify if the list includes safety-related equipment, non-safety related electrical or post-accident monitoring instruments. The staff reviewed the list and identified safety-related equipment and post-accident monitoring instruments are contained in the table.

DCA Tier 1, ITAAC No. 2 of Table 2.8-2, only verifies safety-related equipment are qualified and does not include post-accident monitoring equipment. Please provide clarity on how equipment subject to the requirements of 10 CFR 50.49 in Tier 2, Table 3.11-1, will be verified to meet the requirements of 10 CFR 52.47(b)(1) and 10 CFR 52.47(a)(13).

- c. In its response to RAI 8894, Question 03.11-15, the applicant stated that NuScale's design does not require the use of non-safety related electric equipment to accomplish any safety functions. However, in DCA Tier 1, ITAAC No. 2 of Table 2.8-2, the applicant refers to nonsafety-related equipment with an augmented equipment qualification design requirement in the design commitment.

Please clarify whether NuScale has nonsafety-related electric equipment affecting safety functions that is required to be qualified per 10 CFR 50.49. If so, please identify which equipment are nonsafety-related and how this equipment will be verified to meet the requirements of 10 CFR 52.47(b)(1) and 10 CFR 52.47(a)(13). Additionally, please clarify what is "augmented equipment qualification design requirement," as stated in the ITAAC.

- d. The staff identified that several electrical and mechanical equipment in DCA Part 2 Tier 2, Table 3.11-1 was removed from DCA Part 2 Tier 1, Table 2.8-1, "Module Specific Mechanical and Electrical/I&C Equipment," and DCA Part 2 Tier 1, Table 13.4-1, "Mechanical and Electrical/Instrumentation and Controls Shared Equipment." Please clarify why there are discrepancies between Tier 1, Table 2.8-1 and Table 13.4-1 and Tier 2, Table 3.11-1.

Meeting Agenda

January 15, 2019

12:00 p.m. – 2:00 p.m.

The purpose of this teleconference was for the U.S. Nuclear Regulatory Commission (NRC) staff to discuss NuScale's response to RAI 8894.

<u>Time</u>	<u>Topic</u>	<u>Speaker</u>
12:00 p.m. – 12:05 p.m.	Introductions	All
12:05 p.m. – 1:45 p.m.	Discussion of Response to RAI 8894	NRC/NuScale
1:45 p.m. – 2:00 p.m.	Public Comments	Public
2:00 p.m.	Adjourn	All

PUBLIC MEETING WITH NUSCALE POWER, LLC

JANUARY 15, 2019
12:00 p.m. –2:00 p.m.

LIST OF ATTENDEES AND PARTICIPANTS

Name	Organization
Cayetano Santos	NRC
Nadim Khan	NRC
Sheila Ray	NRC
Jorge Cintron-Rivera	NRC
Tania Martinez-Navedo	NRC
Nadja Joergensen	NuScale
Chris Maxwell	NuScale
Edan Engstrom	NuScale
Spain Abney	NuScale
Greg Myers	NuScale
Patrick Conley	NuScale
Carrie Fosaaen	NuScale
Sarah Fields	Uranium Watch
Richard McPherson	Member of the Public