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

August 2, 2018

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

FROM: Marieliz Vera, Project Manager ***/RA/***
Licensing Branch 1
Division of Licensing, Sitting,
and Environmental Analysis
Office of New Reactors

SUBJECT: SUMMARY OF THE JUNE 26, 2018, CATEGORY 1 PUBLIC TELECONFERENCE WITH NUSCALE POWER, LLC DESIGN CERTIFICATION APPLICATION SECTION 3.7, "SEISMIC DESIGN," AND 3.8, "DESIGN OF CATEGORY I STRUCTURES"

The U.S. Nuclear Regulatory Commission (NRC) held a Category 1 public teleconference on June 26, 2018, to discuss Final Safety Analysis Report (FSAR) Tier 2, Chapter 3, “Design of Structures, Systems, Components and Equipment,” Sections 3.7, “Seismic Design” and 3.8, “Designs of Category I Structures,” of the NuScale Power, LLC (NuScale) Design Certification. Participants included personnel from NuScale and members of the public.

The public meeting notice can be found in the Agencywide Documents Access and Management Systems under Accession No. ML18176A010. This meeting notice was also posted on the NRC public Website.

The meeting agenda and list of participants can be found in Enclosures 1 and 2, respectively. The technical issues discussed are included in Enclosure 3.

CONTACT: Marieliz Vera, NRO/DLSE
301-415-5861

Summary:

The purpose of this meeting was to discuss the responses for Request for Additional Information (RAI) 9114, Question 03.07.02-31 ((ML17317B553, ML18052B565, ML18135A122)

The applicant will provide a follow-up RAI response reflecting the NRC staff's feedback (Enclosure 3) on validation of simplified NuScale Power Module (NPM) beam model against detailed NPM three dimensional model. The applicant will include the comparison table in the FSAR markup and provide a narrative as to how the dynamic properties in the table demonstrate dynamic compatibility of the two models. The applicant will also provide an explanation for the low cumulative mass in the Z direction as compared to those in the X or Y directions.

Docket No. 52-048

Enclosures:
1. Meeting Agenda
2. List of Attendees
3. RAI Technical Issues Summary

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

SUBJECT: SUMMARY OF THE JUNE 26, 2018, CATEGORY 1 PUBLIC TELECONFERENCE WITH NUSCALE POWER, LLC DESIGN CERTIFICATION APPLICATION SECTION 3.7 "SEISMIC DESIGN," AND 3.8, "DESIGN OF CATEGORY I STRUCTURES" DATE: AUGUST 2, 2018

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ADAMS Accession No.: ML1812A045 ***via email** **NRC-002**

OFFICE	NRO/DLSE/LB1: PM	NRO/DLSE/LB1: LA	NRO/DNRL/LB1: PM
NAME	MVera	MMoore	MVera
DATE	07/31/2018	08/01/2018	08/02/2018

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U.S. NUCLEAR REGULATORY COMMISSION

CATEGORY 1 PUBLIC TELECONFERENCE WITH NUSCALE POWER, LLC

DESIGN CERTIFICATION APPLICATION SECTION 3.7, "SEISMIC DESIGN," AND 3.8, "DESIGN OF CATEGORY I STRUCTURES"

June 26, 2018

10:30 p.m. – 12:00 p.m.

AGENDA

Public Meeting	
10:30-10:35am	Welcome and Introductions
10:35-11:55am	Discussion of the Request for Additional Information
11:55-12:00pm	Public - Questions and Comments

U.S. NUCLEAR REGULATORY COMMISSION

CATEGORY 1 PUBLIC TELECONFERENCE WITH NUSCALE POWER, LLC

DESIGN CERTIFICATION APPLICATION SECTION 3.7, "SEISMIC DESIGN," AND 3.8, "DESIGN OF CATEGORY I STRUCTURES"

LIST OF ATTENDEES

June 26, 2018

NAME	AFFILIATION
Marieliz Vera	U.S. Nuclear regulatory Commission (NRC)
Manas Chakravorty	NRC
Pravin Patel	NRC
Sunwoo Park	NRC
Robert Caldwell	NRC
Marty Bryan	NuScale Power, LLC (NuScale)
Josh Parker	NuScale
J.J. Arthur	NuScale
Nick Brown	NuScale
Tom Ryan	NuScale
Kirsten McKay	NuScale
William Koski	NuScale
Mohsin Kahn	NuScale
Sarah Fields	Public

U.S. NUCLEAR REGULATORY COMMISSION

CATEGORY 1 PUBLIC TELECONFERENCE WITH NUSCALE POWER, LLC

DESIGN CERTIFICATION APPLICATION SECTION 3.7, "SEISMIC DESIGN," AND 3.8, "DESIGN OF CATEGORY I STRUCTURES"

Staff Feedback on Request Additional for Information 9114

Question 03.07.02-31

In its May 15, 2018, response to request for additional (RAI) 9114, Question 03.07.02-31, the applicant provided a table (Table 1) that compares the dynamic modal properties between the simplified NuScale Power Module (NPM) beam model and detailed three dimensional (3D) model and stated that the simplified beam model captures the overall dynamic behavior of the 3D model.

1) The U.S. Nuclear Regulatory Commission (NRC) staff notes that there are some differences between the tables included in the RAI responses dated February 21, 2018 and May 15, 2018, particularly in the values of 3D model modal frequencies. Please explain why these differences exist between the two responses.

2) In Table 1, values for X-Frequency and X-Effective Mass for the 3D model corresponding to the third mode of the beam model (17.14 hertz and 284 slinch) are missing. Explain or clarify this omission.

3) Based on Table 1, the cumulative effective masses for the beam model in the X, Y, and Z directions are 6775, 6802, and 4874, respectively. Explain the low cumulative mass for the Z direction.

4) The NRC staff requested (in staff's April 17, 2018, feedback) that the applicant provide more detailed information about the parameters and their values considered in the model validation process and an assessment of how they demonstrate the dynamic compatibility between the NPM beam model and 3D model. However, the response did not include any such assessment. Please provide an assessment (narrative) as to how the dynamic properties shown in Table 1 demonstrate dynamic compatibility of the two models.

5) In the previous RAI response dated February 21, 2018, the applicant proposed to include the comparison table in the final safety analysis report (FSAR). However, in the current RAI response, the proposed table was deleted in the FSAR markup. The NRC staff considers this comparison table to be an important basis of staff's determination of acceptability of the NPM beam model integrated into the Reactor Building (RXB) dynamic model for soil structure interaction (SSI) analysis. Therefore this information should be included in the FSAR.