RAIO-0318-59234

March 21, 2018

Docket No. 52-048

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

SUBJECT: NuScale Power, LLC Supplemental Response to NRC Request for Additional Information No. 137 (eRAI No. 8973) on the NuScale Design Certification Application

REFERENCES:

1. U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 137 (eRAI No. 8973)," dated August 05, 2017
2. NuScale Power, LLC Response to NRC "Request for Additional Information No. 137 (eRAI No. 8973)," dated October 13, 2017
3. NuScale Power, LLC Response to NRC "Request for Additional Information No. 137 (eRAI No. 8973)," dated February 23, 2018
4. NuScale Power, LLC Supplemental Response to "NRC Request for Additional Information No. 137 (eRAI No. 8973)," dated January 4, 2018

The purpose of this letter is to provide the NuScale Power, LLC (NuScale) supplemental response to the referenced NRC Request for Additional Information (RAI).

The Enclosure to this letter contains NuScale's supplemental response to the following RAI Question from NRC eRAI No. 8973:

- 03.08.04-19

This letter and the enclosed response make no new regulatory commitments and no revisions to any existing regulatory commitments.

If you have any questions on this response, please contact Marty Bryan at 541-452-7172 or at mbryan@nuscalepower.com.

Sincerely,

Zackary W. Rad
Director, Regulatory Affairs
NuScale Power, LLC

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Enclosure 1: NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 8973

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Enclosure 1:

NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 8973

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Response to Request for Additional Information
Docket No. 52-048

eRAI No.: 8973
Date of RAI Issue: 08/05/2017

NRC Question No.: 03.08.04-19

10 CFR 50, Appendix A, GDC 1, 2, and 4, provide requirements to be met by SSC important to safety. In accordance with these requirements, DSRS Section 3.8.4 provides review guidance pertaining to the design of seismic Category I structures, other than the containment.

The section views in Figures 3B-14 and 3B-42 show wall portions that do not appear to be included in the SAP model section views in Figures 3B-15 and 3B-43, respectively. Clarify and/or correct the inconsistencies between these figures, as applicable.

NuScale Response:

As discussed, in a public meeting on February 20, 2018, a supplement to NuScale's original response to RAI 8973 03.08.04-19 is provided.

Supplemental Question:

In its response the applicant indicated the floor elevations at which partition walls are located including elevations 126'-0," 100'-0," and other lower elevations. Further, the response states that the partition walls at EL 100' have higher loadings from the EL 100' ISRS than the partition walls at lower elevations. Regarding the ISRS at the aforementioned elevations, the ISRS figures in FSAR Section 3.7.2 show the ISRS at EL 126' to be greater than those at EL 100.' Therefore, the staff requests the applicant to clarify whether the seismic input for the partition walls at EL 126' is based on the ISRS at EL 126' or provide the basis for the use of ISRS at other elevations as applicable.

Response:

Seismic input for the partition walls at Elelvation 126 ft is not based on the ISRS at El 126'. During the design for the partition walls, it was recognized that the two rectangular room partition walls at elevation 126' were enveloped by the generic analysis and design of the partition walls at elevation 100'. The partition wall sections at elevation 126' are close to Column

line 4 on the inside of RXB outer walls and their overall dimensions are smaller than those used for the generic structural analysis evaluations at elevation 100'. The two rectangular room partition wall sections at elevation 126' have the following characteristics:

- Close to Column line 4 on the inside of the RXB outer walls
- Overall dimensions are smaller than those used for the generic structural analysis evaluations at elevation 100'
- Are higher frequency than the long span partition walls at 100' elevation
- Produces lower demand forces and moments

Impact on DCA:

There are no impacts to the DCA as a result of this response.