

June 15, 2017

Docket No. 52-048

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

SUBJECT: NuScale Power, LLC Response to NRC Request for Additional Information No. 30 (eRAI No. 8828) on the NuScale Design Certification Application

REFERENCE: U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 30 (eRAI No. 8828)," dated May 26, 2017

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

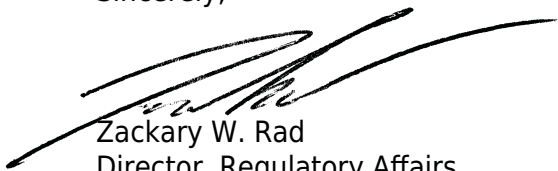
The Enclosure to this letter contains NuScale's response to the following RAI Question from NRC eRAI No. 8828:

- 13.01.01-1

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 Steven Mirsky at 240-833-3001 or at smirsky@nuscalepower.com.

Sincerely,



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

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RAIO-0617-54479

Enclosure 1: NuScale Response to NRC Request for Additional Information eRAI No. 8828



RAIO-0617-54479

Enclosure 1:

NuScale Response to NRC Request for Additional Information eRAI No. 8828

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

eRAI No.: 8828

Date of RAI Issue: 05/26/2017

NRC Question No.: 13.01.01-1

Chapter 13, "Conduct of Operations," Section 13.1, "Organizational Structure"

REQUIREMENTS

10 CFR 52.79(a)(26), in part, requires the FSAR to include information pertaining to the applicant's organizational structure and personnel qualification requirements for operation of the facility. The organizational structure consists of the corporate-level Management and Technical Support Organization and the onsite Operating Organization. The review of organizational structure information in the Design Certification Application (DCA) Part 2, Final Safety Analysis Report (FSAR) (Chapter 13, "Conduct of Operations," Section 13.1, "Organizational Structure") is performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (SRP) Chapter 13, "Conduct of Operations," Sections 13.1.1 and 13.1.2-13.1.3, and is required by 10 CFR 52.47(a)(9).

ISSUE

SRP Section 13.1.1, "Management and Technical Support Organization," Subsection I, states that the applicant should (1) describe the qualification requirements for each identified *position or class of positions providing technical support to the onsite Operating Organization*, and (2) specify the qualification requirements for *individuals holding management and supervisory positions in organizational units providing support to the onsite Operating Organization*.

COL information item 13.1-3 under FSAR Section 13.1.3, "Qualification of Nuclear Plant Personnel," states:

"A COL applicant that references the NuScale Power Plant design certification will provide a description of the qualification requirements for each management, operating technical,



and maintenance position described in the Operating Organization.”

A COL information item, similar to COL 13.1-3 above for the onsite Operating Organization, has not been provided for the COL applicant to provide a description of the qualification requirements for identified positions or classes of positions within the Management and Technical Support Organization; information that is specified under acceptance criteria in SRP Section 13.1.1.

INFORMATION NEEDED

The applicant is requested to provide a dedicated COL information item in Section 13.1.1 of the FSAR, for the COL applicant to provide a description of the qualification requirements for identified positions or classes of positions, including management and supervisory positions of organizational units, within the Management and Technical Support Organization, that provide technical support and resources to the onsite Operating Organization.

NuScale Response:

COL Item 13.1-1 has been supplemented with the requested information per the attached FSAR Section 13.1.1 markup.

Conforming changes to FSAR Section 1.8, Table 1.8-2, COL Item 13.1-1 are per the attached FSAR Section 1.8 markup.

Impact on DCA:

FSAR Section 13.1 and FSAR Table 1.8-2 have been revised as described in the response above and as shown in the markups provided in this response.

RAI 13.01.01-1, RAI 13.02.02-1, RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

Table 1.8-2: Combined License Information Items

Item No.	Description of COL Information Item	Section
COL Item 1.1-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the site-specific plant location.	1.1
COL Item 1.1-2:	A COL Applicant that references the NuScale Power Plant design certification will provide the schedules for completion of construction and commercial operation of each power module.	1.1
COL Item 1.4-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the prime agents or contractors for the construction and operation of the nuclear power plant.	1.4
COL Item 1.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide site-specific diagrams and legends, as applicable.	1.7
COL Item 1.7-2:	A COL Applicant that references the NuScale Power Plant design certification will list additional site-specific P&IDs and legends as applicable.	1.7
COL Item 1.8-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a list of departures from the certified design.	1.8
COL Item 1.9-1:	A COL Applicant that references the NuScale Power Plant design certification will review and address the conformance with regulatory criteria in effect six months before the docket date of the COL application for the site-specific portions and operational aspects of the facility design.	1.9
COL Item 1.10-1:	A COL Applicant that references the NuScale Power Plant design certification will evaluate the potential hazards resulting from construction activities of the new NuScale facility to the safety-related and risk significant structures, systems, and components of existing operating unit(s) and newly constructed operating unit(s) at the co-located site per 10 CFR 52.79(a)(31). The evaluation will include identification of any management and administrative controls necessary to eliminate or mitigate the consequences of potential hazards and demonstration that the limiting conditions for operation of an operating unit would not be exceeded. This COL item is not applicable for construction activities (build-out of the facility) at an individual NuScale Power Plant with operating NuScale Power Modules.	1.10
COL Item 2.0-1:	A COL Applicant that references the NuScale Power Plant design certification will demonstrate that site-specific characteristics are bounded by the design parameters specified in Table 2.0-1. If site-specific values are not bounded by the values in Table 2.0-1, the COL applicant will demonstrate the acceptability of the site-specific values in the appropriate sections of its combined license application.	2.0
COL Item 2.1-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site geographic and demographic characteristics.	2.1
COL Item 2.2-1:	A COL Applicant that references the NuScale Power Plant design certification will describe nearby industrial, transportation, and military facilities. The COL applicant will demonstrate that the design is acceptable for each potential accident, or provide site-specific design alternatives.	2.2
COL Item 2.3-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific meteorological characteristics for Section 2.3.1 through Section 2.3.5, as applicable.	2.3
COL Item 2.4-1:	A COL Applicant that references the NuScale Power Plant design certification will investigate and describe the site-specific hydrologic characteristics for Section 2.4.1 through Section 2.4.14, as applicable.	2.4
COL Item 2.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific geology, seismology, and geotechnical characteristics for Section 2.5.1 through Section 2.5.5, below.	2.5
COL Item 3.2-1:	A COL Applicant that references the NuScale Power Plant design certification will update Table 3.2-1 to identify the classification of site-specific SSC.	3.2
COL Item 3.3-1:	A COL Applicant that references the NuScale Power Plant design will confirm that nearby structures exposed to severe and extreme (tornado and hurricane) wind loads will not collapse and adversely affect the RXB or Seismic Category I portion of the CRB.	3.3
COL Item 3.4-1:	A COL Applicant that references the NuScale Power plant design certification will confirm the final location of structures, systems, and components subject to flood protection and final routing of piping.	3.4

Table 1.8-2: Combined License Information Items (Continued)

Item No.	Description of COL Information Item	Section
COL Item 12.3-1:	A COL Applicant that references the NuScale Power Plant design certification will develop the administrative controls regarding access to High Radiation Areas per the guidance of Regulatory Guide 8.38.	12.3
COL Item 12.3-2:	A COL Applicant that references the NuScale Power Plant design certification will develop the administrative controls regarding access to very high radiation areas per the guidance of Regulatory Guide 8.38.	12.3
COL Item 12.3-3:	A COL Applicant that references the NuScale Power Plant design certification will specify personnel exposure monitoring hardware, specify contamination identification and removal hardware, and establish administrative controls and procedures to control access into and exiting the radiologically controlled area.	12.3
COL Item 12.3-4:	A COL Applicant that references the NuScale Power Plant design certification will develop the processes and programs necessary for the implementation of 10 CFR 20.1501 related to conducting radiological surveys, maintaining proper records, calibration of equipment, and personnel dosimetry.	12.3
COL Item 12.3-5:	A COL Applicant that references the NuScale Power Plant design certification will describe design criteria for locating additional fixed area radiation monitors.	12.3
COL Item 12.3-6:	A COL Applicant that references the NuScale Power Plant design certification will develop the processes and programs necessary for the use of portable airborne monitoring instrumentation, including accurately determining the airborne iodine concentration in areas within the facility where plant personnel may be present during an accident.	12.3
COL Item 12.3-7:	A COL Applicant that references the NuScale Power Plant design certification will develop the processes and programs associated with Objectives 5 and 6, to work in conjunction with design features, necessary to demonstrate compliance with 10 CFR 20.1406, and the guidance of Regulatory Guide 4.21.	12.3
COL Item 12.4-1:	A COL Applicant that references the NuScale Power Plant design certification will estimate doses to construction personnel from a co-located existing operating nuclear power plant that is not a NuScale Power Plant.	12.4
COL Item 12.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe elements of the operational radiation protection program to ensure that occupational and public radiation exposures are as low as reasonably achievable in accordance with 10 CFR 20.1101.	12.5
COL Item 13.1-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the corporate or home office management and technical support organization, <u>including a description of the qualification requirements for each identified position or class of positions, including management and supervisory positions, in organizational units providing technical support for plant operations.</u>	13.1
COL Item 13.1-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the proposed structure, functions, and responsibilities of the onsite organization necessary to operate and maintain the plant. The proposed operating staff shall be consistent with the minimum licensed operator staffing requirements in Section 18.5.	13.1
COL Item 13.1-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the qualification requirements for each management, operating, technical, and maintenance position described in the operating organization.	13.1
COL Item 13.2-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description and schedule of the initial training and qualification as well as requalification programs for reactor operators, and senior reactor operators, and non-licensed plant staff (plant management, supervisory personnel, technicians and general employees).	13.2
COL Item 13.2-2:	<u>A COL applicant that references the NuScale Power Plant design certification will provide a description and schedule of the non-licensed plant staff training programs including initial training, periodic retraining and qualification requirements.</u>	<u>13.2</u>
COL Item 13.3-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the onsite operational support center (OSC) including the direct communication system or systems between the OSC and the control room.	13.3

CHAPTER 13 CONDUCT OF OPERATIONS

13.1 Organizational Structure

13.1.1 Management and Technical Support Organization

RAI 13.01.01-1

COL Item 13.1-1: A COL applicant that references the NuScale Power Plant design certification will provide a description of the corporate or home office management and technical support organization, including a description of the qualification requirements for each identified position or class of positions, including management and supervisory positions, in organizational units providing technical support for plant operations.

13.1.2 Operating Organization

COL Item 13.1-2: A COL applicant that references the NuScale Power Plant design certification will provide a description of the proposed structure, functions, and responsibilities of the onsite organization necessary to operate and maintain the plant. The proposed operating staff shall be consistent with the minimum licensed operator staffing requirements in Section 18.5.

13.1.3 Qualifications of Nuclear Plant Personnel

COL Item 13.1-3: A COL applicant that references the NuScale Power Plant design certification will provide a description of the qualification requirements for each management, operating, technical, and maintenance position described in the operating organization.