

September 13, 2016

MEMORANDUM TO: Mark Tonacci, Chief
Licensing Branch 1
Division of New Reactor Licensing
Office of New Reactors

FROM: Rocky D. Foster, Project Manager /RA/
Licensing Branch 1
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: SUMMARY OF JUNE 23, 2016, AND AUGUST 30, 2016, OPEN
PUBLIC TELECONFERENCE MEETINGS WITH NUSCALE POWER,
LLC TO DISCUSS TOPICS RELATED TO HUMAN FACTORS
ENGINEERING AND OTHER TOPICS RELATED TO THE NUSCALE
DESIGN CERTIFICATION APPLICATION

On June 23, 2016, and August 30, 2016, Category 1 open public teleconference meetings were held at U.S. Nuclear Regulatory Commission (NRC) Headquarters Rockville, Maryland office between representatives of the NRC staff and NuScale Power, LLC (NuScale), to discuss topics related to NuScale's small modular reactor human factors engineering and other topics related to the NuScale design certification application. In particular, the discussion focused on the NRC staff's position regarding the submittal of the NuScale letter dated June 8, 2016, titled, "Regulatory Process for Addressing Licensed Operator Staffing Regulations in the NuScale Design Certification," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16168A463).

The meeting began with introductions of the teleconference participants and continued with an update on the status of response to the NuScale's letter titled, "Regulatory Process for Addressing Licensed Operator Staffing Regulations in the NuScale Design Certification." The NRC staff response is presented as the, "NRC Staff Position on Control Room Staffing Submittal," (Enclosure 1).

The teleconference call continued onto clarification of the NRC staff position on Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) M06, M07, M08, M27, I22, and Q04. This was a follow-up teleconference from the public meeting held on July 20, 2016, regarding applicability of generic ITAAC as applied to the NuScale design. Regarding ITAAC M06, M07, and M08, which relate to preoperational testing of valves, the NRC staff stated that the ITAAC are all from the American Society of Mechanical Engineers Standard (ASME) ASME QME-1-2007 related to qualification of active mechanical equipment used in nuclear power plants. Specifically, Section QV-7000, "Qualification program," of the standard provides qualification requirements for power actuated, self-actuated, and safety/relief valves.

CONTACT: Rocky D. Foster, NRO/DNRL/LB1
(301) 415-5787

Specific test and acceptance criteria noted in ITAAC M06, M07, and M08 are consistent with this ASME standard. Regarding ITAAC M27 related to as-built inspection, the NRC staff stated that they do understand the NuScale position and the basis for their recommendation and will consider rewording to clarify ITAAC M27. However, the NRC staff noted that the focus under ITAAC M27 is on the installed configuration and not on the qualification. The NRC staff provided clarification on ITAAC I22 related to preoperational test of main control room displays and alarms including the remote shutdown station. At the July 20, 2016, meeting, NuScale presenter had stated that the intent and scope of ITAAC I22 is not clear to them. The NRC staff clarified that the displays to be tested are limited to the type A, B, and C variables identified in accordance with Regulatory Guide 1.97, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants," Revision 4, June 2008. These variable are selected because of their safety significance with respect to monitoring accident conditions. The NRC staff will revise the wording to clarify the intent and scope of the ITAAC I22. With respect to ITAAC Q04 related to equipment qualification and as-built inspection of Class 1E digital or analog equipment, the clarifying language provided by NuScale is acceptable to the NRC staff. In response, the NuScale staff stated that they were in agreement with the NRC staff and have no further questions on these ITAAC.

At that time the meeting was opened to the public for comments and questions. The public did not have any comments and questions. The meeting ended with an overall summary of the discussion.

The agendas and a list of meeting attendees are included in Enclosures 2 and 3, respectively. The meeting notices are available in ADAMS with Accession No. ML16125A043 and ML16223A554. Please direct any inquiries to Rocky D. Foster at (301) 415-5787, or email at rocky.foster@nrc.gov.

ADAMS is the system that provides text and image files of NRC public documents and can be accessed at the NRC Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. If you do not have access to ADAMS or have problems accessing the documents located in ADAMS, contact the NRC Public Document Room staff at (800) 397-4209, (301) 415-4737, or pdr@nrc.gov.

Project No.: PROJ0769

Enclosures:

1. NRC Position on Control Room Staffing Submittal
2. Meeting Agendas
3. Meeting Attendees

cc: NuScale Power LLC Listserv

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cc: NuScale Power LLC Listserv

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ML16252A258

***via email**

NRC-001

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DATE	09/08/2016	09/12/2016	09/13/2016

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NRC Staff Position on Control Room Staffing Submittal

August 30, 2016

Design Certification Application (DCA) Submittal

Part 2 / Tier 1

In the Human Factors Engineering (HFE) section, a statement that the minimum staffing requirements are located in the Design Certification Rule Part 52 Appendix. NOTE: The 10 Code of *Federal Regulations* (CFR) Part 52 Appendix will contain the NuScale-Specific Staffing Requirements (e.g., requirement provisions, a staffing table, and appropriate table notes).

Part 2 / Tier 2

In Chapter 18, "Human Factors Engineering," a statement that the minimum staffing requirements are located in the Design Certification Rule Part 52 Appendix. NOTE: The 10 CFR Part 52 Appendix will contain the NuScale-Specific Staffing Requirements (e.g., requirement provisions, a staffing table, and appropriate table notes).

Applicant should include alternative staffing requirement design technical basis and justification detailed information including a substantive rationale (i.e., a description of how the HFE program conforms to the guidance in NUREG-0711 and NUREG-1791).

Part 7 – Exemptions/Departures

Alternative staffing requirement request, description with justification including the requirement provisions, staffing table, and appropriate table notes, and a discussion of why an exemption from 10 CFR Part 50.54(m)(2)(i), table titled, "Minimum Requirements Per Shift for On-Site Staffing of Nuclear Power Units by Operator and Senior Operators Licensed Under 10 CFR Part 55," is not necessary for NuScale.

Design Certification Rule

Part 52 Appendix - Example Title – Appendix F, Paragraph V, "Applicable Regulations"

The alternative staffing requirement rule language including the requirement provisions, staffing table, and appropriate table notes.

MEETING AGENDA

JUNE 23, 2016

**NUSCALE HUMAN FACTORS ENGINEERING MEETING
ON CONTROL ROOM STAFFING**

TIME	TOPIC	LEAD
2:00 p.m. - 2:10 p.m.	Introductions	All
2:10 p.m. - 2:50 p.m.	Human Factors Engineering related to Control Room Staffing	NRC/NuScale
2:50 p.m. - 3:00 p.m.	Comments and Questions	All

MEETING AGENDA

AUGUST 30, 2016

TOPICS RELATED TO HUMAN FACTORS ENGINEERING

TIME	TOPIC	LEAD
1:00 p.m. - 1:10 p.m.	Introductions	All
1:10 p.m. - 1:35 p.m.	Discussion on NuScale's approach towards addressing the regulatory process for licensed operator staffing regulations in the NuScale design certification application	NRC/NuScale
1:35 p.m. - 1:45 p.m.	Other topics related to the NuScale design certification application	NRC/NuScale
1:55 p.m. - 2:00 p.m.	Public comments/questions	All
1:55 p.m. - 2:00 p.m.	Meeting Summary	NRC

MEETING ATTENDEES

NAME	AFFILIATION
Mark Tonacci	NRC
Michael Junge	NRC
Paul Pieringer	NRC
Amy D'Agostino	NRC
Lauren Kent	NRC
Maurin Scheetz	NRC
Greg Cranston	NRC
Ann Hove	NRC
Tom Scarborough	NRC
Dinesh Taneja	NRC
Geary Mizuno	NRC
Demetrius Murray	NRC
Nan Chien	NRC
John Segala	NRC
Joe Ashcraft	NRC
James Strnisha	NRC
Tung Truong	NRC
Rocky Foster	NRC
Rajender Aulick	NRC
Tom Bergman	NuScale
Jennie Wike	NuScale
Paul Kumar	NuScale
Steve Mirsky	NuScale
Carl Markert	NuScale
Carl Dumsday	NuScale
Steve Pope	NuScale
Tony Lentz	NuScale
Gary Becker	NuScale
Sara Barczak	Southern Alliance for Clean Energy
Don Safer	Public