

March 17, 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: AUDIT PLAN FOR NUSCALE POWER, LLC PRE-APPLICATION
ACTIVITIES HUMAN FACTORS ENGINEERING TOPICS (PROJ0769)

In a May 6, 2015, letter Mr. Zackary Rad, Manager, Licensing Support, NuScale Power, LLC (NuScale) submitted to the U.S. Nuclear Regulatory Commission (NRC), titled, "NuScale Power, LLC Submittal of Human Factors Engineering (HFE) Implementation Plans" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15139A214), letter dated August 6, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of a Second Set of Human Factors Engineering (HFE) Implementation Plans," (ADAMS Accession No. ML15223A042), letter dated September 15, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of NuScale Preliminary Concept of Operations Summary and Response to NRC Questions on Control Room Activities" (ADAMS Accession No. ML15258A846), and letter dated November 19, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of Human Factors Engineering Verification and Validation Implementation Plans, Revision 0" (ADAMS Accession No. ML15323A504), in support of pre-application activities.

The NRC staff has identified a need to audit supporting documents for the before mentioned letters. The audit will take place at the NuScale Power, LLC facility in Corvallis, Oregon on March 29, 2016, through March 31, 2016. A copy of the audit plan is enclosed.

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

Project No.: PROJ0769

Enclosure:
As stated

cc: DC NuScale Power LLC Listserv

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: AUDIT PLAN FOR NUSCALE POWER, LLC PRE-APPLICATION
ACTIVITIES HUMAN FACTORS ENGINEERING TOPICS (PROJ0769)

In a May 6, 2015, letter Mr. Zackary Rad, Manager, Licensing Support, NuScale Power, LLC (NuScale) submitted to the U.S. Nuclear Regulatory Commission (NRC), titled, "NuScale Power, LLC Submittal of Human Factors Engineering (HFE) Implementation Plans" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15139A214), letter dated August 6, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of a Second Set of Human Factors Engineering (HFE) Implementation Plans," (ADAMS Accession No. ML15223A042), letter dated September 15, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of NuScale Preliminary Concept of Operations Summary and Response to NRC Questions on Control Room Activities" (ADAMS Accession No. ML15258A846), and letter dated November 19, 2015, Mr. Steven Mirsky, Manager, Licensing Washington, DC, NuScale, submitted to the NRC, titled, "NuScale Power, LLC Submittal of Human Factors Engineering Verification and Validation Implementation Plans, Revision 0" (ADAMS Accession No. ML15323A504), in support of pre-application activities.

The NRC staff has identified a need to audit supporting documents for the before mentioned letters. The audit will take place at the NuScale Power, LLC facility in Corvallis, Oregon on March 29, 2016, through March 31, 2016. A copy of the audit plan is enclosed.

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

Project No.: PROJ0769

Enclosures:
As Stated

cc: DC NuScale Power LLC Listserv

DISTRIBUTION:

PUBLIC	MTonacci, NRO	MJunge, NRO
LB1 R/F	PPieringer, NRO	RFoster, NRO
MBrown, NRO	G Cranston, NRO	LKent, NRO

ADAMS Accession No: ML16068A437

***via email**

NRO-002

OFFICE	NRO/DNRL/LB1/PM	NRO/DNRL/LB1/LA	NRO/DCIP/HOIB: BC	NRO/DNRL/LB3/LPM
NAME	RFoster	MBrown	MJunge	GCranston
DATE	03/09/2015	03/09/2015	03/16/2015	03/17/2015

OFFICIAL RECORD COPY

**NuScale Power, LLC
Human Factors Engineering Submittals
Pre-Application Activities
"Human Factors Engineering Topics" Audit Plan**

APPLICANT: NuScale Power, LLC

APPLICANT CONTACT: Steve Mirsky
Steve Pope
Tim Tovar, et al.

DATE: March 29, 2016 to March 31, 2016

LOCATION: NuScale Power, LLC Office
1100 Circle Boulevard
Corvallis, OR 97330

REVIEWERS: Paul Pieringer (NRO/DCIP/HOIB)
Lauren Kent (NRO/DCIP/HOIB)
Amy D'Agostino (RES/DRA/HFRB)
Doug Eskins (OCHCO/ADHRTD/TTC/RTTBB)

PROJECT MANAGER: Rocky D. Foster (NRO/DNRL/LB1)

AUDIT OBJECTIVE:

The objective of the planned audit is to review detailed documents and simulator operations to:

- Verify the staffing plan validation methodology addresses guidance from NUREG-1791, "Guidance for Assessing Exemption Requests from the Nuclear Power Plant Licensed Operator Staffing Requirements Specified in 10 CFR 50.54(m)," or describes an alternate method that is comparable.
- Verify Scenarios effectively challenge workload for the proposed staffing configuration using guidance in Brookhaven National Laboratory Technical Report 20918-1-2015, "Methodology to Assess the Workload of Challenging Operational Conditions In Support of Minimum Staffing Level Reviews"
- Verify through observing simulator scenarios that the simulator can effectively model the scenarios needed for the staffing plan validation.
- Determine if and how phased validation is being used. Compare finding with what is in the verification and validation implementation plan for consistency.
- Evaluate intended scope for the human-system interface Design element. Will it be sufficient to satisfy a "Results Summary Report?" If not identify the deltas.

The audit to review detailed supporting documents and simulator operations will aid in resolving the technical issues concerning multiple letters submitted by NuScale Power, LLC (NuScale) to the U.S. Nuclear Regulatory Commission staff relating to pre-application activities for human factors engineering (HFE) topics implementation plans and the preliminary concept of operations summary.

REQUESTED MATERIAL FOR AUDIT:

(Based on the proposed implementation plans and the preliminary concept of operations summary) Documentation including detailed supporting documents and simulator operations supporting NuScale's position on HFE topics implementation plans and the preliminary concept of operations summary.