

November 2, 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: MEETING SUMMARY - CLOSED MEETING WITH NUSCALE
POWER, LLC TO DISCUSS NUSCALE'S DRAFT TOPICAL
REPORT ON LOSS OF COOLANT ACCIDENT EVALUATION
METHODOLOGY

On September 12, 2016, representatives of the U.S. Nuclear Regulatory Commission (NRC) staff and NuScale Power, LLC (NuScale) held a closed meeting at the NuScale office located at 11333 Woodglen Avenue, Suite 205, Rockville, Maryland, 20852, for the NRC staff to conduct a page-turn and discuss NRC staff's questions on the draft loss of coolant accident (LOCA) evaluation methodology topical report (TR).

To prepare for the meeting, the NRC staff performed an initial cursory review of the TR. The NRC staff identified potential issues that would prevent docketing of the TR for review by NRC staff. These issues are identified below. The NRC staff makes no claims that this list is complete, and that additional items could be revealed once a more thorough acceptance review is performed.

Items identified by the NRC staff that would prevent docketing include:

- The latest version of LOCA TR does not include information, by reference or inclusion, related to the decay heat curve associated with the initial power level condition. The staff is aware that NuScale's distortion analysis report, which is not referenced in the LOCA TR, implies that the latest version of LOCA TR only contains NIST-1 LOCA test results and relevant validations corresponding to a reduced decay heat power level. If the test results correspond to a reduced decay heat power level, then the TR does not include sufficient information related to limiting system parameters and high ranking system phenomena, as well as any distortion of the test results.

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- The TR did not include information on the Control Rod Ejection Accident where the event initiates from failure of the control rod housing. The evaluation should include consideration of LOCA criteria with a power profile from the rod ejection. Information is necessary relative to the analytical treatment of this event, or a reference to where this methodology is contained.
- In Section 5.3.1 of the TR, the NRELAP5 plant model nodalization in Figure 5.2 does not include sufficient detail for the primary or the secondary components, nor does it specify how the nodalization was determined (i.e., sensitivity analyses). Further, there is no justification or rationale as to why the selected modelling was chosen for specific areas of the system.
- The TR does not include a sufficient description about how the fuel bundle initial stored energy is calculated.

At the conclusion of the meeting, the NRC project manager asked each NRC staff participant if they had any additional questions or concerns. No additional items were identified by the NRC staff. With no further discussion, the meeting was adjourned.

The list of meeting attendees is included in the enclosure. The meeting notice and agenda are available in Agencywide Documents Access and Management System (ADAMS) under Accession No. ML16242A422. ADAMS is the system that provides text and image files of NRC's public documents and can be accessed at the NRC's 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.

Enclosure:
Meeting Attendees

cc: NuScale DC ListServ

- The TR did not include information on the Control Rod Ejection Accident where the event initiates from failure of the control rod housing. The evaluation should include consideration of LOCA criteria with a power profile from the rod ejection. Information is necessary relative to the analytical treatment of this event, or a reference to where this methodology is contained.
- In Section 5.3.1 of the TR, the NRELAP5 plant model nodalization in Figure 5.2 does not include sufficient detail for the primary or the secondary components, nor does it specify how the nodalization was determined (i.e., sensitivity analyses). Further, there is no justification or rationale as to why the selected modelling was chosen for specific areas of the system.
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***via email**

NRC-002

OFFICE	PM: NRO/DNRL/LB1	LA: NRO/DNRL/LB1	BC:NRO/DSRA/LB	PM: NRO/DNRL/LB1
NAME	RFoster*	MBrown*	RKaras*	GCranston*
DATE	10/28/2016	10/31/2016	11/01/2016	11/02/2016

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List of Meeting Attendees

September 12, 2016

NuScale Power, LLC
11333 Woodglen Ave., Suite 205
Rockville, Maryland 20852

Attendee Name	Affiliation
Shanlai Lu	NRC
Carl Thurston	NRC
Peter Lien	NRC
Rocky Foster	NRC
Steve Mirsky	NuScale
Steve Pope	NuScale
Jennie Wike	NuScale
Brian Wolf	NuScale
Wendell Wagner	NuScale
Pravin Sawant	NuScale
Jeff Luitjens	NuScale
Archie Manoharan	NuScale
Selim Kuran	NuScale
Urmi Shome-Dinath	NuScale
Robert Houser	NuScale
Meghan McCloskey	NuScale
Dan Prelewicz	NuScale
Scott Franz	NuScale
Eric Coryell	NuScale
Bert Dunn	Numark
Charles Solbrig	Numark
Marvin Smith	Numark
Donald Rowe	Numark
John Knick	Numark

Enclosure