



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 27, 2018

MEMORANDUM TO: Samuel S. Lee, Chief
Licensing Branch 1
Division of Licensing, Siting, and
Environmental Analysis
Office of New Reactors

FROM: Getachew Tesfaye, Senior Project Manager /RA/
Licensing Branch 1
Division of Licensing, Siting, and
Environmental Analysis
Office of New Reactors

SUBJECT: SUMMARY OF THE JUNE 27, 2018, CATEGORY 1 PUBLIC
TELECONFERENCE TO DISCUSS WHITE PAPER AND DRAFT
TOPICAL REPORT ON ACCIDENT SOURCE TERM
METHODOLOGY ASSOCIATED WITH THE NUSCALE DESIGN
CERTIFICATION APPLICATION

The U.S. Nuclear Regulatory Commission (NRC) held a Category 1 public teleconference on June 27, 2018, to discuss the NuScale Power, LLC (NuScale) white paper and its draft topical report on accident source term methodology associated with its design certification application. This teleconference was a follow-up to the June 7, 2018, meeting on the same subject. Participants included personnel from NuScale and members of the general public that participated via bridgeline.

The public meeting notice dated June 27, 2018, can be found in the NRC's Agencywide Documents Access and Management Systems under Accession No. ML18177A485. This meeting notice was also posted on the NRC public website.

Enclosed is the meeting agenda (Enclosure 1), list of participants (Enclosures 2), and overview (Enclosure 3).

Docket No. 52-048

Enclosures:

1. Meeting Agenda
2. List of Attendees
3. Meeting Overview

cc w/encl.: DC NuScale Power, LLC Listserv

CONTACT: Getachew Tesfaye NRO/DLSE
301-415-8013

SUBJECT: SUMMARY OF THE JUNE 27, 2018, CATEGORY 1 PUBLIC TELECONFERENCE
TO DISCUSS ACCIDENT SOURCE TERM METHODOLOGY ASSOCIATED WITH
THE NUSCALE DESIGN CERTIFICATION APPLICATION
DATED: JULY 27, 2018

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ADAMS Accession No.: ML18206A933**NRC-001**

OFFICE	DLSE/LB1:PM	DLSE/LB1:LA	DLSE/RPAC:BC	DSRA/SPRA:BC	DLSE/LB1:PM
NAME	GTesfaye(c)	MMoore	MDudek (M. Hart)*	MHayes (JSchaperow)*	GTesfaye (s)
DATE	7/20/2018	7/26/2018	7/25 /2018	7/25/2018	7/27/2018

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U.S. NUCLEAR REGULATORY COMMISSION
CATEGORY 1 PUBLIC TELECONFERENCE TO DISCUSS
ACCIDENT SOURCE TERM METHODOLOGY
ASSOCIATED WITH THE NUSCALE DESIGN CERTIFICATION APPLICATION

MEETING AGENDA
JUNE 27, 2018

02:30 p.m. – 02:35 p.m.

Introductions and Identification of topics

02:35 p.m. – 04:20 p.m.

Accident Source Term Methodology Revision Discussion

04:20 p.m. – 04:30 p.m.

Questions from the Public

04:30 p.m.

End of Meeting

U.S. NUCLEAR REGULATORY COMMISSION
CATEGORY 1 PUBLIC TELECONFERENCE TO DISCUSS
ACCIDENT SOURCE TERM METHODOLOGY
ASSOCIATED WITH THE NUSCALE DESIGN CERTIFICATION APPLICATION

LIST OF ATTENDEES

June 27, 2018

Name	Organization
Getachew Tesfaye	U.S. Nuclear Regulatory Commission (NRC)
Jason Schaperow	NRC
Hanh Phan	NRC
Robert Taylor	NRC
Olivia Mikula	NRC
Michelle Hayes	NRC
Odunayo Ayegbusi	NRC
Kevin Coyne	NRC
Samuel Lee	NRC
Michelle Hart	NRC
Michael Dudek	NRC
Zackary Rad	NuScale Power, LLC (NuScale)
Paul Infanger	NuScale
Gary Becker	NuScale
Cindy Williams	NuScale
Paul Guinn	NuScale
Jennie Wike	NuScale
Mark Shaver	NuScale
Scott Weber	NuScale
Dave Leaver	NuScale
Sarah Bristol	NuScale
Russell Goff	NuScale
Claudio Delfino	NuScale
Robert Gamble.	NuScale
Sarah Fields	General Public

U.S. NUCLEAR REGULATORY COMMISSION
OVERVIEW OF THE JUNE 27, 2018, PUBLIC MEETING TO DISCUSS
ACCIDENT SOURCE TERM METHODOLOGY
ASSOCIATED WITH THE NUSCALE DESIGN CERTIFICATION APPLICATION

This teleconference was a follow-up to the June 7, 2018, meeting on a white paper submitted by NuScale Power, LLC (NuScale) on May 15, 2018, titled "Accident Source Terms Regulatory Framework," (Agencywide Documents Management and Access System (ADAMS) ML18136A850) and topics related to the maximum hypothetical accident (MHA) observed by the U.S. Nuclear Regulatory Commission (NRC) staff during an audit of the draft Revision 3 of the NuScale Accident Source Term Methodology licensing topical report performed April 9 through May 4, 2018 (audit summary report (ADAMS Accession No. ML18172A076)).

The discussion was focused on the five major observations made by the NRC staff during the June 7, 2018, meeting (meeting summary record (ADAMS Accession No. ML18173A260)). The NRC staff addressed questions from NuScale on these observations and provided additional clarification. The following is a summary of the discussions:

1. Probabilistic risk assessment (PRA) Acceptability: NuScale asked for clarification on what the NRC staff considers to be gaps between the proposed use of PRA to screen event sequences for inclusion in the MHA source term and the PRA used in the design certification application (DCA) since both activities are taking place in the DCA stage. The NRC staff explained that the PRA reviewed in the DCA stage is by rule a description of the design-specific PRA and its results. The detailed content of the PRA is not reviewed for adequacy at the DCA stage. However, in the proposed use of PRA in the draft revision to the topical report, the NRC staff is asked to reach a risk informed finding. This is analogous to a risk informed license amendment request for an operating plant where the applicant is expected to show technical adequacy consistent with Regulatory Guide (RG) 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," or by providing the content of the PRA for detailed review by the NRC staff. The NRC staff stated that it has not developed a definitive list of gaps between the DCA PRA and the PRA that would be needed for the topical report application proposed by NuScale. The staff suggested that NuScale review RG 1.200 and propose to the staff what the gaps are and what could be done to address the gaps.
2. Issue Finality: NuScale acknowledged that there is a potential for a finality issue and they plan to include a combined license (COL) information item to address site-specific deviations that may affect accident source term determination when implementing the proposed methodology. The staff encouraged NuScale to propose potential solutions to the staff's concern in the topical report that ensure clarity for COL applicants.
3. Methodology: NuScale stated that they have reviewed RG 1.174, "An Approach for using Probabilistic Risk Assessment in Risk-informed Decisions on Plant-specific Changes to the Licensing Basis" and NUREG-1855, Revision 1, "Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decision Making." With additional clarification, NuScale acknowledged the NRC staff's concern about the

limited events considered (only internal events) and individual sequences verses a full scope (all hazards) evaluation in the proposed methodology. Regarding the basis for using a threshold core damage frequency (CDF) of 10^{-6} per year to identify “credible” accidents, NuScale cited NEI 96-07, “Guidelines for Title 10 of the *Code of Federal Regulations* (CFR), Section 50.59 Evaluations” (endorsed by RG 1.187), where this value is used to determine if a proposed modification requires NRC prior review and approval. The NRC staff noted that in the context of 10 CFR 50.59 evaluation, the 10^{-6} value is used as a screening criteria not as a threshold.

4. Potential Policy Issue: NuScale asked what it needed to do to address the potential policy issue. NRC staff responded that it would follow the agency’s regulatory process for any potential policy issues. NuScale replied that it would support the staff as needed in this process.
5. The following NRC staff question was discussed at the meeting:

NRC staff: Would different combined license applications (COLAs) potentially make different decisions such that one COLA would have a core melt MHA, while another has a spiked iodine coolant release MHA?

NuScale: COLA applicant will use the Accident Source Term Methodology in the topical report to determine their site-specific MHA. If their site-specific dose is higher than what is calculated in the DCA for a particular event, they will have to justify a departure. The revised topical report and DCA will include conditions and limitations and a final safety analysis report (FSAR) markup but not an implementation plan.

NRC staff encouraged NuScale to include a detailed implementation plan in either the topical report or the FSAR.

At the conclusion of the meeting, NuScale stated that they had a better understanding of the staff’s issues and intend to address them in the revised topical report. NuScale wanted to know whether there are any particular observations that the staff considers to be potential show stoppers. The NRC staff noted that these were pre-submittal interactions and it is not appropriate for the staff to pre-judge the proposed approach based on a white paper and a draft topical report revision. The staff has not identified any areas that require exemption from the regulations, but it recognizes that NuScale’s proposed approach is a first-of-a-kind application. The staff’s concerns discussed in the June 7, 2018, and June 27, 2018, meetings are issues the staff has identified to date and are not a complete list of potential issues or questions regarding the approach. A more complete list of issues can only be generated when the submittal is received and initial review is completed. The NRC staff reiterated its concern about the schedule challenge this has created for this area of review and other areas that have been impacted by the revision to the accident source term methodology.

Next steps: NuScale will submit the revised topical report by July 31, 2018. NRC staff will perform an acceptance review and will schedule a post submittal public meeting approximately a month after submittal.