

August 8, 2016

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

FROM: Anthony Markley, Senior 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 THERMAL HYDRAULIC STABILITY (TAC#  
RN6302)

On July 7, 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 evaluation and discuss NRC staff's questions on the draft core thermal hydraulic stability topical report (TR).

The NRC staff reviewed the draft report and clarified the information that they need to understand the application of NuScale's TR for review.

During the course of the meeting the NRC staff identified concerns with following subject areas:

- Scaling of the models associated with the experiments conducted.
- Benchmarking of the model associated with boiling water reactors.
- Modeling of heat transfer in the steam generators with the apparent lack of segmentation analysis.
- Highly ranked phenomena from the pre and post evaluations – lack of rationale regarding the disposition and significant validation.
- Applicability of requisite quality assurance programs for code and software quality, change control, and documentation.
- Lack of a reload analysis methodology that would define the safety analysis box for future refueling.

CONTACTS: Gregory Cranston, NRO  
301-415-0546  
[gregory.cranston@nrc.gov](mailto:gregory.cranston@nrc.gov)

Anthony Markley, NRO  
301-415-3165  
[anthony.markley@nrc.gov](mailto:anthony.markley@nrc.gov)

As a result of NRC staff questions associated with the draft application, NuScale committed to the following actions:

- NuScale will add a statement to the Licensing Topical Report (LTR) describing the relationship of the PIM code to the NuScale Quality Assurance (QA) program. The statement should be similar to effect that PIM “is maintained within an NRC-approved QA program.”
- The reload licensing approach should be addressed. For the stability LTR, NuScale will add a statement similar to the following: “On a cycle specific basis, the licensee will confirm the applicability of the regional exclusion stability solution, or update the analysis according to an NRC approved methodology.”
- NuScale will add an expanded discussion to the LTR to describe how the methodology addresses each highly ranked Phenomena Identification and Ranking Table (PIRT) item, and/or adding more to the summary section to summarize the “final PIRT” in comparison to the one formulated before major calculations were performed.
- NuScale will expand the technical discussion of the steam generator heat transfer modeling in the theoretical discussion to provide more detail of the modeling of the single-phase water, two-phase and steam-only heat transfer.

At the conclusion of the meeting, the project manager asked each NRC staff participant if they had any additional questions or concerns. No additional items were identified by the NRC staff. The NuScale licensing staff made the following requests:

- NuScale will coordinate with NRC staff to schedule follow up telephone conference call meetings to discuss NuScale proposed resolution to the comments provided during the meeting. This meeting telephone call should be approximately two weeks from August 7, 2016, and prior to final submission of the report.
- NuScale requested a post TR application submission audit.

The NRC staff indicated support for the subsequent conference call to discuss efforts to address NRC staff concerns. The NRC staff did not commit to a post application submittal audit. Rather, the evaluation of the content of the submitted TR for NRC approval would determine the need for a subsequent audit.

With no further discussion, the meeting was adjourned.

M. Tonacci

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The list of meeting attendees is included in the Enclosure. The meeting notice and agenda are available in the NRC Agencywide Documents Access and Management System (ADAMS) under Accession No. ML16174A270. 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](mailto:pdr@nrc.gov).

Enclosure:  
Meeting Attendees

cc: NuScale List Serv

M. Tonacci

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AMarkley                                RidsOgcMailCentetr  
GCranston                               RidsAcrsAcnwMailCenter  
MBrown                                    MTonacci

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NAME	AMarkley	MBrown	GCranston	MTonacci
DATE	07/26/2016	08/05/2016	08/08/2016	08/08/2016

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**List of Meeting Attendees  
July 7, 2016**

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

<b>Attendee Name</b>	<b>Affiliation</b>	<b>Telephone Number</b>	<b>E-mail Address</b>
Don Todd	NuScale	509-572-1527	<a href="mailto:dtodd@nuscalepower.com">dtodd@nuscalepower.com</a>
Peter Lien	NRC	301-415-0757	<a href="mailto:Peter.Lien@nrc.gov">Peter.Lien@nrc.gov</a>
Anthony Markley	NRC	301-415-3165	<a href="mailto:Anthony.markley@nrc.gov">Anthony.markley@nrc.gov</a>
Matthew Bernard	NRC	301-415-7000	<a href="mailto:Matthew.bernard@nrc.gov">Matthew.bernard@nrc.gov</a>
Peter Yarsky	NRC	301-415-7000	<a href="mailto:Peter.Yarsky@nrc.gov">Peter.Yarsky@nrc.gov</a>
Andy Bielen	NRC	301-415-7000	<a href="mailto:Andrew.bielen@nrc.gov">Andrew.bielen@nrc.gov</a>
Steven Mirsky	NuScale	301-770-0472	<a href="mailto:smirsky@nuscalepower.com">smirsky@nuscalepower.com</a>
Jeff Schmidt	NRC	301-415-4016	<a href="mailto:Jeffrey.schmidt@nrc.gov">Jeffrey.schmidt@nrc.gov</a>
Ray Skarda	NRC	301-415-2168	<a href="mailto:Raymond.skarda@nrc.gov">Raymond.skarda@nrc.gov</a>
Yousef Farawila	NuScale	509-528-5034	<a href="mailto:yfarawila@nuscalepower.com">yfarawila@nuscalepower.com</a>
Kathy Gibson	NRC	301-873-6458	<a href="mailto:Kathy.Gibson@nrc.gov">Kathy.Gibson@nrc.gov</a>
Jenne Wike	NuScale	541-360-0539	<a href="mailto:jwike@nuscalepower.com">jwike@nuscalepower.com</a>
Carrie Fosaaen	NuScale	541-452-7126	<a href="mailto:cfosaaen@nuscalepower.com">cfosaaen@nuscalepower.com</a>
Steven Bajorek	NRC	301-415-2345	<a href="mailto:Stephen.bajorek@nrc.gov">Stephen.bajorek@nrc.gov</a>
Kent Welter	NuScale	541-360-0538	<a href="mailto:KWelter@nuscalepower.com">KWelter@nuscalepower.com</a>
Steve Unikewicz	NuScale	240-833-3015	<a href="mailto:sunikewicz@nuscalepower.com">sunikewicz@nuscalepower.com</a>

Enclosure