May 24, 2016

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

FROM: Prosanta Chowdhury, Project Manager ***/RA/ GCranston for***
Licensing Branch 1
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: SUMMARY OF MAY 10, 2016, CLOSED MEETING WITH NUSCALE POWER, LLC ON STRUCTURES, SYSTEMS, AND COMPONENTS RISK CATEGORIZATION UPDATE (PROJ0769)

On May 10, 2016, a closed meeting was held at the NuScale Power, LLC (NuScale) office located at 11333 Woodglen Avenue, Suite 205, Rockville, Maryland 20852, between representatives of the U.S. Nuclear Regulatory Commission (NRC) staff and NuScale, on structures, systems, and components (SSC) risk categorization update. The purpose of the meeting was for NuScale to discuss the changes to design resulting in re-categorization of SSCs from the May 2013 proprietary document NP-RP-0413-3490-P, "Preliminary Structure, System, and Component Categorization Report." The NRC staff determined in accordance with Title 10 in the *Code of Federal Regulations* 2.390, that the information for discussion during the meeting would be proprietary in nature and, therefore, was closed to the public.

During the meeting, NuScale discussed the SSC categorization updates that were made through March 28, 2016. NuScale stated that some updates have been made subsequent to March 28, 2016; however, for discussion at this meeting, the March 28, updates were adequate.

CONTACT: Gregory Cranston, NRO/DNRL
(301) 415-0546

Prosanta Chowdhury, NRO/DNRL
(301) 415-1647

In the 2-hour discussion, NuScale covered the following from their Internal Memorandum on probabilistic risk assessment (PRA) (Proprietary Class 2, Rev. 5):

1. NuScale criteria for risk significance;
2. PRA SSC candidates for risk significance;
3. PRA systems that do not meet the criteria;
4. System and component risk importance;
5. Contribution of initiating events to internal events core damage frequency (CDF);
6. Contribution of initiating events to internal events large release frequency (LRF);
7. Top ten core damage cutsets of the March 28, 2016, PRA model;
8. Top ten large release cutsets of the March 28, 2016, PRA model
9. Historical change in CDF time as the PRA model and plant design matures;
10. Model update summary;
11. Model uncertainty results;
12. Level 1 CDF uncertainty results; and
13. Level 2 LRF uncertainty results.

In response to an NRC staff question, NuScale stated that estimates of failure rates are hard to come up with for events, such as, (i) large earthquakes causing the reactor building to collapse leading to core damage, and (ii) failure of crane carrying a module and causing the module to fall over leading to core damage; and the failure rate numbers associated with these events will be very small. In response to a related question from the NRC staff, NuScale stated that the reactor pool has refueling boron concentration, and any dropped module would also be at refueling boron concentration.

The NRC staff mentioned that they used NuScale's 2013 proprietary document NP-RP-0413-3490-P to plan for the design certification application review when submitted, and wanted to have an idea of this report's currency including major changes resulting from the most recent updates. Some of the NuScale's PRA audit documents cover some major changes and the NRC staff would have the opportunity to review those during the May 11 – 12, 2016, audit associated with NuScale documents on risk insights drawn from the PRA.

The NRC staff felt that the May 10, 2016 discussion was helpful in focusing on the May 11 – 12, 2016, audit.

While the NRC staff asked clarifying questions, they did not make any comments on the merits or demerits of the updates, or any affirmation, validation, confirmation, or commitments with respect to the updates discussed by NuScale at this meeting. There were no actions items identified for the NRC staff or NuScale at the conclusion of this meeting. The meeting was adjourned at 12:10 p.m. (Eastern Time).

Project No.: PROJ0769

Enclosures:
1. Meeting Agenda
2. Meeting Attendees

cc: DC NuScale Power LLC Listserv

While the NRC staff asked clarifying questions, they did not make any comments on the merits or demerits of the updates, or any affirmation, validation, confirmation, or commitments with respect to the updates discussed by NuScale at this meeting. There were no actions items identified for the NRC staff or NuScale at the conclusion of this meeting. The meeting was adjourned at 12:10 p.m. (Eastern Time).

Project No.: PROJ0769

Enclosures:
1. Meeting Agenda
2. Meeting Attendees

cc: DC NuScale Power LLC Listserv

Distribution
PUBLIC
GCranston, NRO
MBrown, NRO
PChowdhury, NRO
RidsOgcMailCenter
RidsAcrsAcnwMailCenter
LMrowca, NRO

ADAMS Accession No.: **ML16132A224** *via email NRC-001

OFFICE	PM:NRO/DNRL/LB1	LA:NRO/DNRL/LB1	BC:NRO/DSRA/SPR	PM:NRO/DNRL/LB1
NAME	Chowdhury*	IMBrown*	Mrowca*	GCranston
DATE	5/11/2016	5/11/2016	5/20/2016	5/24/2016

OFFICIAL RECORD COPY

Meeting Agenda

NuScale Power, LLC
11333 Woodglen Avenue, Suite 205
Rockville, Maryland 2 0852

Tuesday, May 10, 2016

10:00 a.m. – 10:10 a.m.	Introductions
10:10 a.m. – 11:45 a.m.	Overview of changes to design resulting in re-categorization of Structures, Systems and Components from the May 2013 NuScale proprietary document NP-RP-0413-3490-P, "Preliminary Structure, System, and Component Categorization Report."
11:45 a.m. – 12:00 p.m.	Summary and Conclusions

Enclosure 1

MEETING ATTENDEES

NAME	AFFILIATION
Gregory Cranston	U.S. Nuclear Regulatory Commission(NRC)
Mark Tonacci	NRC
Prosanta Chowdhury	NRC
Brent Clarke	NRC
Mark Caruso	NRC
Lynn Mrowca	NRC
Tony Nakanishi	NRC
Etienne Mullin	NuScale Power, LLC (NuScale)
Steven Pope	NuScale
Steven Unikewicz	NuScale
Sarah Bristol	NuScale
Bill Gulyean	NuScale (Corvallis)
Guy Martin	NuScale (Corvallis)
Cindy Williams	NuScale (Corvallis)