August 7, 2014

MEMORANDUM TO: Stewart Magruder, Branch Chief
Small Modular Reactor Licensing Branch
Division of Advanced Reactors and Rulemaking
Office of New Reactors

FROM: Gregory Cranston, Senior Project Manager ***/RA/***
Small Modular Reactor Licensing Branch
Division of Advanced Reactors and Rulemaking
Office of New Reactors

SUBJECT: SUMMARY OF JULY 22-24, 2014, PUBLIC AND CLOSED MEETINGS WITH THE U.S. NUCLEAR REGULATORY COMMISSION STAFF AND NUSCALE POWER™, LLC, TO DISCUSS NUSCALE'S TESTING PROGRAMS AND ASME PIPING CODES (TAC No. RN6110)

On July 22-24, 2014, the staff from the U.S. Nuclear Regulatory Commission (NRC) and representatives from NuScale Power, LLC (NuScale) held a three-day meeting at the NRC headquarters, located at Two White Flint North, 11545 Rockville Pike, Rockville, MD 20852. On July 22nd, a meeting was held with NuScale personnel for NuScale to make a public presentation to the NRC staff on: the NuScale plant design overview; NuScale Integral System Tests at the NuScale Test Facility; Comprehensive Flow Induced Vibration (FIV) Assessment Program for Reactor Vessel Internals; In-service Inspection/Testing (ISI/IST); Appendix J Testing; and ASME Piping Design. NuScale also provided an update on the NuScale Testing Program. The later half of the meeting was closed to discuss proprietary information related to the NuScale Test Facility and Testing Program.

On July 23rd and July 24th, NuScale personnel covered all the topics that they had discussed on July 22, in much greater technical detail, which included proprietary information. On July 23rd, NuScale representatives discussed their Comprehensive FIV Assessment Program Plan, including prototype and plant start-up testing. NuScale also discussed screening methodology to select those components, including steam generators, most susceptible to FIV; various FIV mechanisms, and post-operation inspections. Additionally, NuScale staff described their activities and plans regarding use of Regulatory Guide 1.20, Rev. 3, "Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing" to address NRC requirements.

On July 24th, NuScale staff gave a presentation to the NRC staff on their approach to addressing ISI/IST regarding reactor vessel internals and their plans for satisfying the requirements to determine containment leakage rate as set forth in Appendix J to 10 CFR Part 50, “Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors”.

Meetings and presentations held on July 22 (second half of meeting) and on July 23-24 were closed to the public because NuScale discussed proprietary information regarding the design of their small modular reactor (SMR).

The meeting agenda and meeting attendees are included in Enclosure 1.

The accession number for the public meeting notice is ML14192B081. The closed meeting notice accession numbers are: ML14197A387, ML14197A363, ML14197A354, and ML14197A329 for the NuScale Testing Program, FIV, ISI/IST and ASME Piping meetings, respectively. These documents are located in the NRC Agencywide Documents Access and Management System (ADAMS). 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 1 (800) 397 4209, (301) 415-4737, or pdr@nrc.gov. A non-proprietary version of the NuScale slide presentations can be found at ML14213A145, ML14213A146, ML14213A148, ML14213A150, and ML14213A151 for the ASME Piping, FIV, ISI/IST, App. J, NuScale Plant Overview, and NuScale Integral System Test meetings, respectively.

Please direct any inquiries to Gregory Cranston at (301) 415-0546, or email Gregory.Cranston@nrc.gov.

Project No.: PROJ0769

Enclosure:
Agenda’s and Attendance List’s

cc: DC NuScale Power LLC Mailing Listserv

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cc: DC NuScale Power LLC Mailing Listserv

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ADAMS ACCESSION No.:ML14218A260 **NRC-001**

OFFICE	PM:NRO/DARR/SMRLB	PM:NRO/DARR/SMRLB
NAME	OTabatabai	GCranston
DATE	08/06/2014	08/07/2014

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NuScale Power™, LLC, Public and Closed Meeting with the U.S. Nuclear Regulatory Commission on the NuScale Testing Program, an overview of Flow Induced Vibration, In-service Inspection and Testing Program, Appendix J Testing, and ASME piping design.

Two White Flint North, Room T-10A01
July 22, 2014
8:30am – 2:00pm.

AGENDA

Time	Topic
8:30 am – 8:45 am	Introductions/Logistics
8:45 am – 10:00 am	NuScale Testing Program Update/later FIV, ISI, IST, Appendix J, and ASME piping design meetings overview
10:00 am -10:15 am	Public Comment Period
10:15 am	Adjourn Public Portion of Meeting
10:15 am – 10:30 am	Break
10:30 am – 1:45 pm	Closed Portion of Meeting NuScale Testing Program Update
1:45 pm	Meeting Adjourn

ATTENDANCE LIST

NAME	AFFILIATION	NAME	AFFILIATION
Devaser, Nishka	NRC	Prelewicz, Dan	NuScale Power
Cranston, Gregory	NRC	Lanese, Lou	NuScale Power
Tabatabai, Omid	NRC	Dobrowolski, Laurene	NuScale Power
Scarbrough, Thomas	NRC	Roberts, A.T.	NuScale Power
Schmidt, Jeffrey	NRC	Rasmussen, Adam	NuScale Power
Nolan, Ryan	NRC	Wolf, Brian	NuScale Power
Bousquet, Earl	NRC	Mirsky, Steven	NuScale Power
LaVera, Ronald	NRC	Reyes, Jose	NuScale Power
Grady, Anne-Marie	NRC	Houser, Robert	NuScale Power
Davis, Robert	NRC	Chalk, Daniel	Department of Energy
Frankl, Istvan	NRC		
Makar, Gregory	NRC	Budzynski, John	NRC
Goel, Raj	NRC	Bajorek, Stephen	NRC
Reichelt, Eric	NRC	Li, Tuan	NRC
McMurray, Nicholas	NRC	Li, Y.C. (Renee)	NRC
Lien, Peter	NRC	Bousquet, Earl	NRC

Enclosure

NuScale Power™, LLC, Closed Meeting with the U.S. Nuclear Regulatory Commission
Flow Induced Vibration on Reactor Vessel Internals

Two White Flint North, Room T-10A01
July 23, 2014
8:30am – noon

AGENDA

Time	Topic
8:30am – 8:45am	Introductions/Logistics
8:45am – 10:15am	Flow Induced Vibration on Reactor Vessel Internals
10:15am – 10:30am	Break
10:30am – 12:00pm	Flow Induced Vibration on Reactor Vessel Internals (cont.)
12:00pm	Adjourn Meeting

ATTENDANCE LIST

NAME	AFFILIATION	NAME	AFFILIATION
Devaser, Nishka	NRC	Peres, Mark	NuScale Power
Cranston, Gregory	NRC	Liszkai, Tamas	NuScale Power
Tabatabai, Omid	NRC	Wolf, Brian	NuScale Power
Scarbrough, Thomas	NRC	Mirsky, Steven	NuScale Power
Mitchell, Matthew	NRC	Reyes, Jose	NuScale Power
Huang, Jason	NRC		
Terao, David	NRC	Chalk, Daniel	Department of Energy
LaVera, Ronald	NRC		
Downey, Steven	NRC	Budzynski, John	NRC
Davis, Robert	NRC	Li, Y.C. (Renee)	NRC
Talbot, Francis	NRC	Reichelt, Eric	NRC
Makar, Gregory	NRC	McMurray, Nicholas	NRC
Ray, Neil	NRC		

NuScale Power™, LLC, Public and Closed Meeting with the U.S. Nuclear Regulatory Commission On In-service Inspection, In-service Testing, and Appendix J Testing

Two White Flint North, Room T-10A01
July 24, 2014
8:30am – noon

AGENDA

Time	Topic
8:30am – 8:45am	Introductions/Logistics
8:45am – 10:15am	In-service Inspection, In-service Testing, and Appendix J
10:15am – 10:30am	Break
10:30am – 12:00pm	In-service Inspection, In-service Testing, and Appendix J (cont.)
12:00pm	Adjourn Meeting

ATTENDANCE LIST

NAME	AFFILIATION	NAME	AFFILIATION
Devaser, Nishka	NRC	Keating, Robert	NuScale Power
Cranston, Gregory	NRC	Lashley, Michael	NuScale Power
Tabatabai, Omid	NRC	Liszkai, Tamas	NuScale Power
Scarbrough, Thomas	NRC	Peres, Mark	NuScale Power
Charkrabarti, Samir	NRC	Roberts, A. Thomas	NuScale Power
Mrowca, Lynn	NRC	Mirsky, Steven	NuScale Power
McMurray, Nicholas	NRC	Reyes, Jose	NuScale Power
LaVera, Ronald	NRC	Morrill, Randall	NuScale Power
Grady, Anne-Marie	NRC		
Terao David	NRC	Chalk, Daniel	Department of Energy
Chien, Nan	NRC		
Ray, Neil	NRC	Mitchell, Matthew	NRC
Goel, Raj	NRC	Downey, Steven	NRC
Reichelt, Eric	NRC		

NuScale Power, LLC, Public and Closed Meeting with the U.S. Nuclear Regulatory Commission on ASME Piping Codes

Two White Flint North, Room T-8A01
July 24, 2014
1:00pm – 3:00pm

AGENDA

Time	Topic
1:00pm – 1:15pm	Introductions/Logistics
1:15pm – 2:15pm	NuScale ASME Piping Design
2:15pm – 2:30pm	Break
2:30pm – 3:00pm	NuScale ASME Piping Design
3:00pm	Adjourn Meeting

ATTENDANCE LIST

NAME	AFFILIATION	NAME	AFFILIATION
Devaser, Nishka	NRC	Keating, Robert	NuScale Power
Cranston, Gregory	NRC	Lashley, Michael	NuScale Power
Tabatabai, Omid	NRC	Liszkai, Tamas	NuScale Power
Scarbrough, Thomas	NRC	Peres, Mark	NuScale Power
Charkrabarti, Samir	NRC	Roberts, A. Thomas	NuScale Power
Mrowca, Lynn	NRC	Mirsky, Steven	NuScale Power
McMurray, Nicholas	NRC	Reyes, Jose	NuScale Power
LaVera, Ronald	NRC	Morrill, Randall	NuScale Power
Grady, Anne-Marie	NRC		
Terao David	NRC	Chalk, Daniel	Department of Energy
Chien, Nan	NRC		
Ray, Neil	NRC	Mitchell, Matthew	NRC
Goel, Raj	NRC	Downey, Steven	NRC
Reichelt, Eric	NRC		