August 30, 2013

MEMORANDUM TO: Anna H. Bradford, Branch Chief

Small Modular Reactor Licensing Branch 2 Division of Advanced Reactors & Rulemaking

Office of New Reactors

FROM: Gregory V. Cranston, Senior Project Manager

Small Modular Reactor Licensing Branch 2 /RA/ Division of Advanced Reactors & Rulemaking

Office of New Reactors

SUBJECT: SUMMARY OF AUGUST 20-22, 2013, CLOSED MEETINGS

WITH THE U.S. NUCLEAR REGULATORY COMMISSION STAFF AND NUSCALE POWER, LLC, TO DISCUSS THE NUSCALE CURRENT DESIGN FOR DESIGN SPECIFIC REVIEW STANDARD CHAPTERS 7, 9, AND 10 (TAC No.

RN6110)

On August 20 -22, 2013, closed meetings were held between the U.S. Nuclear Regulatory Commission (NRC) and representatives from NuScale Power, LLC (NuScale) at the NRC Offices at Three White Flint North, 11601 Landsdown Street, North Bethesda, MD 20852, Room 03-A28.

The purpose of these meetings was for NuScale personnel to present their current designs for systems associated with Standard Review Plans (NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition) or NuScale Design Specific Review Standards (DSRS) for Chapters 7 (Instrumentation and Controls), 9 (Auxiliary Systems) and 10 (Steam and Power Conversion). This information will be used by NRC staff to assist in the preparation of the DSRS's for NuScale.

The meeting agendas and meeting attendees are included in Enclosures 1 and 2.

The accession numbers for the meeting notices and meeting presentations are provided below and the documents are in the NRC Agencywide Documents Access and Management System (ADAMS). Both proprietary and non-proprietary versions are listed below.

- NuScale Meeting Notice on Chapter 7 ML13219B145
 - NuScale presentation on Instrumentation and Controls Chapter 7, Proprietary Version - ML13217A009
 - NuScale presentation on Instrumentation and Controls Chapter 7, Nonproprietary Version - ML13217A006
- NuScale Meeting Notice on Chapter 9 ML13219B151

- NuScale presentation on Auxiliary Systems Chapter 9, Cover through Page 44, Proprietary Version - ML13217A176
- NuScale presentation on Auxiliary Systems Chapter 9, Page 45 through End, Proprietary Version - ML13217A177
- NuScale presentation on Auxiliary Systems Chapter 9, Cover through Page 39,
 Nonproprietary Version ML13217A172
- NuScale presentation on Auxiliary Systems Chapter 9, Page 40 through End, Nonproprietary Version - ML13217A173
- NuScale Meeting Notice on Chapter 10 ML13219B170
 - NuScale presentation on Steam and Power Conversion Chapter 10, Cover through Page 39, Proprietary Version - ML13217A179
 - NuScale presentation on Steam and Power Conversion Chapter 10, Page 40 through End, Proprietary Version - ML13217A167
 - NuScale presentation on Steam and Power Conversion Chapter 10, Cover through Page 16, Nonproprietary Version - ML13217A174
 - NuScale presentation on Steam and Power Conversion Chapter 10, Page 17 through Page End, Nonproprietary Version - ML13217A175

Non-proprietary documents are available electronically in ADAMS 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 pdf@nrc.gov.

Please direct any inquiries to Gregory Cranston at 301-415-0546, or email <u>Gregory.Cranston@nrc.gov</u>.

Project No.: PROJ0769

Enclosure:

1. Agenda

2. List of Attendees

cc: NuScale Power LLC ListServ

- NuScale presentation on Auxiliary Systems Chapter 9, Page 45 through End, Proprietary Version - ML13217A177
- NuScale presentation on Auxiliary Systems Chapter 9, Cover through Page 39,
 Nonproprietary Version ML13217A172
- NuScale presentation on Auxiliary Systems Chapter 9, Page 40 through End,
 Nonproprietary Version ML13217A173
- NuScale Meeting Notice on Chapter 10 ML13219B170
 - NuScale presentation on Steam and Power Conversion Chapter 10, Cover through Page 39, Proprietary Version - ML13217A179
 - NuScale presentation on Steam and Power Conversion Chapter 10, Page 40 through End, Proprietary Version - ML13217A167
 - NuScale presentation on Steam and Power Conversion Chapter 10, Cover through Page 16, Nonproprietary Version - ML13217A174
 - NuScale presentation on Steam and Power Conversion Chapter 10, Page 17 through Page End, Nonproprietary Version - ML13217A175

Non-proprietary documents are available electronically in ADAMS 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.

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

Project No.: PROJ0769

Enclosure: 1. Agenda

2. List of Attendees

cc: NuScale Power LLC ListServ

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ADAMS ACCESSION NO.:ML13241A223 via e-mail* NRC-001

| OFFICE | PM:NRO/DARR/SMRLB2 | PM:NRO/DARR/SMRLB2 | BC:NRO/DARR/SMRLB2 |
|--------|--------------------|--------------------|--------------------|
| NAME | SShaikh | GCranston* | ABradford |
| DATE | 08/30/2013 | 08/30/2013 | 08/30/2013 |

OFFICIAL RECORD COPY

AGENDAS

NuScale Power, LLC, Closed Meetings with the U.S. Nuclear Regulatory Commission (NRC)

Three White Flint North, Room: O-03A28

NuScale Instrumentation and Controls Design Overview for Design Specific Review Standard (DSRS) Chapter 7 Development

Tuesday, August 20, 2013

| <u>TIME</u> | TOPIC | <u>LEAD</u> |
|-------------------|--------------------------------------|------------------------|
| 1:00 pm - 1:15 pm | Introductions and Meeting Objectives | NRC/NuScale |
| 1:15 pm - 1:50 pm | Background | Jason Pottorf, NuScale |
| 1:50 pm - 2:30 pm | NuScale-specific DSRS Comments | Jason Pottorf, NuScale |
| 2:30 pm - 2:45 pm | Break | |
| 2:45 pm - 3:15 pm | Digital RPS Project Plan Overview | Jason Pottorf, NuScale |
| 3:15 pm - 3:45 pm | Results Achieved/ Path Forward | Jason Pottorf, NuScale |
| 3:45 pm - 4:00 pm | Questions | NuScale |
| 4:00 pm | Adjourn | |

NuScale Steam and Power Conversion Systems Overview for DSRS Chapter 10 Development

Wednesday, August 21, 2013

| Time | Topic | Lead |
|-------------------|--|----------------------|
| 8:30am - 8:50am | 8:30am - 8:50am Introductions and Meeting Objectives | |
| 8:50am - 9:45am | Plant Overview/Background | J.J. Arthur, NuScale |
| 9:45am - 10:30am | Chapter 10 System Overview | J.J. Arthur, NuScale |
| 10:30am - 10:45am | Break | |
| 10:45am - 12:00pm | Decay Heat Removal System | J.J. Arthur, NuScale |
| 12:00pm - 1:00pm | Break | |
| 1:00pm - 2:00pm | Chapter 10 System Overview/ Questions | J.J. Arthur, NuScale |
| 2:00pm - 4:00pm | Project Management Discussion | NRC |

NuScale Auxiliary Systems Overview for DSRS Chapter 9 Development

Thursday, August 22, 2013

| Time | Topic | Lead |
|-------------------|--------------------------------------|---------------------------------|
| 8:30am – 8:50am | Introductions and Meeting Objectives | NRC / NuScale |
| 8:50am – 9:45am | Spent Fuel Pool | Barry Reichelderfer, NuScale |
| 9:45am – 10:30am | Ultimate Heat Sink | Barry Reichelderfer, NuScale |
| 10:30am – 10:45am | Break | |
| 10:45am – 12:00pm | Containment Evacuation | Barry Reichelderfer, NuScale |
| 12:00pm – 1:00pm | Break | |
| 1:00pm – 2:00pm | CVCS System Design | Barry Reichelderfer, NuScale |
| 2:00pm – 4:00pm | Chapter 9 Wrap-up/ Questions | Barry Reichelderfer, NuScale |
| 4:00pm | Adjourn | |

ATTENDANCE LISTS

NuScale Power, LLC, Closed Meeting with the U.S. Nuclear Regulatory Commission (NRC)

Three White Flint North, Room: 03A28

NuScale Instrumentation and Controls Design Overview for Design Specific Review Standard (DSRS) Chapter 7 Development

Tuesday, August 20, 2013

| NAME | AFFILIATION | NAME | AFFILIATION |
|----------------|-----------------|-----------|-------------------|
| GCranston | NRC/NRO/DARR | DSantos | NRC/NRO/DE |
| MJones | NRC/NRO/DARR | IJung | NRC/NRO/DE |
| SShaikh | NRC/NRO/DARR | YYang | NRC |
| EWallace | NuScale | JAshcraft | NRC |
| SMirsky | NuScale | TJackson | NRC |
| DNeve | NuScale | SShaikh | NRC/NRO/DARR |
| MBrasel | NuScale | TMossman | NRC/NRO/DE/ICE2 |
| JPottorf | NuScale | GThomas | NRC/NRO/DSRA/SRSB |
| BReichelderfer | NuScale | GClarkson | NuScale |
| EMartinez | NRC/NRO/DE/ICE2 | KNguyen | NRC/NRO/DE |
| JJArthur | NuScale | | |

NuScale Steam and Power Conversion Systems Overview for DSRS Chapter 10 Development

Wednesday, August 21, 2013

| NAME | AFFILIATION | NAME | AFFILIATION |
|----------------|-------------------|------------|-----------------|
| GCranston | NRC/NRO/DARR | DReddy | NRC/NRO/DSRA |
| MJones | NRC/NRO/DARR | TSweat | NRC/NRO/DSRA |
| SShaikh | NRC/NRO/DARR | RNolan | NRC/NRO/DSRA |
| EWallace | NuScale | LWheeler | NRC/NRO/DSRA |
| SMirsky | NuScale | JHoncharik | NRC/NRO/DE |
| DNeve | NuScale | NRay | NRC/NRO/DE |
| MBrasel | NuScale | AStubbs | NRC/NRO/DSRA |
| JPottorf | NuScale | EMcKenna | NRC/NRO/DSRA |
| BReichelderfer | NuScale | ADiaz | NRC/NRO/DSRA |
| EMartinez | NRC/NRO/DE/ICE2 | GClarkson | NuScale |
| JJArthur | NuScale | TMossman | NRC/NRO/DE/ICE2 |
| GThomas | NRC/NRO/DSRA/SRSB | SShaikh | NRC/NRO/DARR |

NuScale Auxiliary Systems Overview for DSRS Chapter 9 Development

Thursday, August 22, 2013

| NAME | AFFILIATION | NAME | AFFILIATION |
|----------------|-------------------|---------------|--------------|
| GCranston | NRC/NRO/DARR | RHernandez | NRC/NRO/DSRA |
| MJones | NRC/NRO/DARR | TSweat | NRC/NRO/DSRA |
| SShaikh | NRC/NRO/DARR | GCurran | NRC/NRO/DSRA |
| EWallace | NuScale | LWheeler | NRC/NRO/DSRA |
| SMirsky | NuScale | SFarnsworth | NuScale |
| DNeve | NuScale | BPeters | NuScale |
| MBrasel | NuScale | AStubbs | NRC/NRO/DSRA |
| JPottorf | NuScale | EMcKenna | NRC/NRO/DSRA |
| BReichelderfer | NuScale | ADiaz | NRC/NRO/DSRA |
| EMartinez | NRC/NRO/DE/ICE2 | MFeatherstone | NuScale |
| JJArthur | NuScale | MMiller | NuScale |
| GThomas | NRC/NRO/DSRA/SRSB | RBiasca | NuScale |
| BVettori | N NRC/NRO/DSRA | DBotha | NuScale |
| TMossman | NRC/NRO/DE/ICE2 | SShaikh | NRC/NRO/DARR |