

November 2, 2017

MEMORANDUM TO: Samuel S. Lee, Chief  
Licensing Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

FROM: Omid Tabatabai, Senior Project Manager /RA/  
Licensing Branch 1  
Division of New Reactor Licensing  
Office of New Reactors

SUBJECT: SUMMARY OF OCTOBER 24, 2017, PUBLIC MEETING WITH  
NUSCALE POWER, LLC, TO DISCUSS STAFF REQUEST FOR  
ADDITIONAL INFORMATION NO. 9005 RELATED TO  
CHAPTER 7, "INSTRUMENTATION AND CONTROLS," OF THE  
NUSCALE DESIGN CERTIFICATION APPLICATION

On October 24, 2017, representatives of the U.S. Nuclear Regulatory Commission (NRC) and NuScale Power, LLC, (NuScale) held a public teleconference meeting. Portions of the teleconference was closed to public due to the proprietary nature of the discussion. The purpose of this meeting was to discuss staff's request for additional information (RAI) No. 9005 related to Chapter 7, "Instrumentation and Controls," in the NuScale Design Certification Application (DCA) and to receive clarification from NuScale on their response to the RAI 9005. NuScale's response to the RAI 9005 is available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML17272A298. A complete copy of NuScale's DCA is available on the NRC public Web page at <https://www.nrc.gov/reactors/new-reactors/design-cert/nuscale/documents.html>.

Enclosure 1, "Summary of the October 24, 2017 Teleconference between the NRC staff and NuScale," captures the publically available summary of the topics discussed during the teleconference. The non-publically available version of the meeting summary is available in ADAMS under Accession No. ML17305B286. NuScale has reviewed this meeting summary for technical accuracy.

The agenda and list of meeting attendees are included in Enclosures 2 and 3, respectively. The meeting notice is available in ADAMS under Accession No. ML17257A332.

Docket No. 52-048

Enclosures:

1. Summary of the October 24, 2017  
Teleconference between the NRC Staff and NuScale
2. Agenda
3. Attendees

CONTACT: Omid Tabatabai, NRO/DNRL  
301-415-6616

SUBJECT: SUMMARY OF OCTOBER 24, 2017, PUBLIC MEETING WITH NUSCALE POWER, LLC, TO DISCUSS STAFF REQUEST FOR ADDITIONAL INFORMATION NO. 9005 RELATED TO CHAPTER 7, "INSTRUMENTATION AND CONTROLS," OF THE NUSCALE DESIGN CERTIFICATION APPLICATION DATED:

DISTRIBUTION:

PUBLIC  
 SLee, NRO  
 IJung, NRO  
 DTaneja, NRO  
 LBetancourt, NRO  
 OTabatabai, NRO  
 FAKstulewicz, NRO  
 RidsNroDnrILb1  
 RidsNroDnrl  
 RidsAcrsAcnwMailCenter  
 RidsOgcMailCenter  
 NuScale DC Listserv

ADAMS Accession No.: ML17304A978

\*via email

NRC-001

|        |                 |                 |                           |                 |
|--------|-----------------|-----------------|---------------------------|-----------------|
| OFFICE | NRO/DNRL/LB1:PM | NRO/DNRL/LB1:LA | NRO/DEI/ICEB:BC*          | NRO/DNRL/LB1:PM |
| NAME   | OTabatabai      | SGreen          | IJung (Dinesh Taneja for) | OTabatabai      |
| DATE   | 10/31/2017      | 11/02/2017      | 11/1/2017                 | 11/2/2017       |

**OFFICIAL RECORD COPY**

**SUMMARY OF THE OCTOBER 24, 2017 TELECONFERENCE**  
**BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION STAFF AND NUSCALE**

NuScale Technical Report, (TR)-0616-49121, "NuScale Instrument Setpoint Methodology Technical Report," describes NuScale's methodology for determining safety-related instrument setpoint uncertainties and includes example calculations of total loop uncertainties for the low and low-low reactor coolant system (RCS) flow sensors.

In its response to Request of Additional Information (RAI) 9005, NuScale provided a comparison between the uncertainties in RCS flow measurements, based on indicated RCS flow, and percent calibrated span. The purpose of this teleconference was for the staff to obtain clarification on how NuScale determined the Reference Accuracy (% calibrated span) values based on the RCS flow uncertainty and RCS flow Accuracy values.

NuScale explained that for 'Low Flow' the analytical limit (AL) was going to be set at a RCS flow of 1.7 cubic ft/sec and for 'Low-Low Flow' the AL was going to be 0 cubic ft/sec. NuScale used the 'low-low' value for no-flow and also for negative/reverse flow conditions. NuScale also stated that, per design, reactor power percentage (%) is almost a 1-to-1 ratio with RCS flow. To determine the setpoints for low and low-low flow conditions, NuScale is planning to use the calculated high uncertainty value of [REDACTED], which corresponds to almost 0% reactor power, or 0 cubic ft/sec RCS flow. NuScale used this high uncertainty value in the Sensor Reference Accuracy formula (as provided in the RAI response) to calculate the Reference Accuracy (% calibrated span) values. In other words, since NuScale is using the high uncertainty value of [REDACTED] to bound the uncertainty for both the low and low-low RCS flow rate protective functions, NuScale believes that the reference accuracy value of [REDACTED] for the low RCS flow protective function is conservative. The staff is satisfied with NuScale's clarification and explanation.

The staff has no further question nor requires supplemental information to continue its evaluation of NuScale response to RAI 9005.

**MEETING AGENDA**

**Tuesday, October 24, 2017**

|                |   |
|----------------|---|
| 2:00-2:10 p.m. | Welcome and Introductions                                 |
| 2:10-2:30 p.m. | Discussion of the issue list and RAI Response 9005        |
| 2:30-2:40 p.m. | Public Questions and Comments                             |
| 2:40-3:00 p.m. | Closed portion of discussion related to RAI Response 9005 |

## **LIST OF ATTENDEES**

### **NuScale**

Darrell Gardner  
Jeff Kosky  
Brian Arnholt  
Rufino Ayala

### **NRC Staff**

Omid Tabatabai  
Dinesh Taneja  
Joseph Ashcraft  
Dawnmathews Kalathiveettil  
Yaguang Yang  
Derek S. Halverson