

November 08, 2017

Docket: 52-048

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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11555 Rockville Pike
Rockville, MD 20852-2738

SUBJECT: NuScale Power, LLC Supplemental Response to NRC Request for Additional Information No. 69 (eRAI No. 8809) on the NuScale Design Certification Application

REFERENCES: 1. U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 69 (eRAI No. 8809)," dated June 21, 2017
2. NuScale Power, LLC Response to NRC "Request for Additional Information No. 69 (eRAI No.8809)," dated August 16, 2017

The purpose of this letter is to provide the NuScale Power, LLC (NuScale) supplemental response to the referenced NRC Request for Additional Information (RAI).

The Enclosure to this letter contains NuScale's supplemental response to the following RAI Question from NRC eRAI No. 8809:

- 19-9

This letter and the enclosed response make no new regulatory commitments and no revisions to any existing regulatory commitments.

If you have any questions on this response, please contact Darrell Gardner at 980-349-4829 or at dgardner@nuscalepower.com.

Sincerely,



Jennie Wike
Manager, Licensing
NuScale Power, LLC

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Enclosure 1: NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 8809



RAIO-1117-57105

Enclosure 1:

NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 8809

Response to Request for Additional Information Docket No. 52-048

eRAI No.: 8809

Date of RAI Issue: 06/21/2017

NRC Question No.: 19-9

The scope, criteria, and process used to determine Regulatory Treatment of Nonsafety Systems (RTNSS) for the passive plant designs are established in:

1. SECY-94-084, "Policy and Technical Issues Associated with the Regulatory Treatment of Nonsafety Systems in Passive Plant Designs," dated March 28, 1994 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML003708068) and associated Staff Requirements Memorandum (SRM), June 30, 1994 (ADAMS Accession No. ML003708098);
2. SECY-95-132, "Policy and Technical Issues Associated with the Regulatory Treatment of Nonsafety Systems (RTNSS) in Passive Plant Designs," dated May 22, 1995 (ADAMS Accession No. ML003708005), and associated SRM, June 28, 1995 (ADAMS Accession No. ML003708019); and
3. SECY-96-128, "Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design," June 12, 1996 (ADAMS Accession No. ML003708224), and associated SRM, January 15, 1997 (ADAMS Accession No. ML003755486).

The NRC staff uses guidance contained in Standard Review Plan (SRP) 19.3 Revision 0, dated June 2014, "Regulatory Treatment of Non-Safety Systems for Passive Advanced Light Water Reactors," to conduct its review of an applicant's RTNSS evaluation. In accordance with SRP 19.3, Revision 0 (page 19.3-6), staff responsible for the review of the applicant's probabilistic risk assessment (PRA) will verify that the applicant has met the following acceptance criterion: The applicant has determined those non-safety related structures, systems and components (SSCs), if any, used to prevent the occurrence of initiating events and, based on their importance to risk as determined from the PRA, has included them in the scope of RTNSS.

The staff has reviewed the information in Section 19.3 of the final safety analysis report (FSAR) and examined additional clarifying information from an audit of information supporting Chapter 19 of the FSAR and determined that it needs additional information to complete its review of Section 19.3 of the FSAR, as follows:



1. The staff could not verify that the applicant completely addressed the following screening criteria for assessing the risk of significance of Structures, Systems, and Components (SSCs) with respect to initiating event frequency as stipulated on page 19.3-10 of SRP 19.3, Revision 0, dated 2014:

a: Does the calculation of the initiating event frequency consider the nonsafety-related SSCs?

b: Does the unavailability of the non safety-related SSCs significantly affect the calculation of the initiating event frequency?

c: Does the initiating event significantly affect the CDF and the LRF -contributes more than 10 percent of the at power or shutdown internal events CDF?

The staff requests that the results of the above assessment be documented in the FSAR so that staff can make a reasonable assurance finding.

B. The staff could not find an evaluation for determining non-safety related SSCs that could prevent a module drop Initiating Event during refueling operations. Such SSCs may include, but not be limited to (1) DC power and (2) the Heavy Load System, which includes the reactor building crane (RBC), the RBC control system devices, Containment Vessel Flange Tool, the Reactor Vessel Flange Tool, and the Module Lift device. The staff is requesting the applicant to provide this evaluation in the FSAR or justify in the FSAR why such an evaluation is unnecessary.

NuScale Response:

Per discussion during a public meeting with the staff on October 17, 2017, the following information supplements the information provided in NuScale's original response.

The functions of the containment evacuation system (CES) are summarized in FSAR Section 9.3.6. The CES is not modeled in the PRA because, at the system level, it does not function to mitigate a severe accident.

Faults in the CES that could lead to a plant trip are included in the general reactor trip initiating event (IE-TGS---TRAN-NSS) and thus, the CES is not identified as a unique initiator in the response to Question 19-9, Item a.

As such the CES has not been identified as a candidate risk significant system in FSAR Tables 19.1-20, 19.1-27, 19.1-64, and 19.1-70. Consistent with the response to Question 19-9, Item c, the CES is not included in the regulatory treatment of nonsafety-related systems (RTNSS) program because it does not meet the RTNSS criteria identified in FSAR Section 19.3.

Impact on DCA:

There are no impacts to the DCA as a result of this response.
