June 28, 2019 Docket No. 52-048

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

SUBJECT: NuScale Power, LLC Submittal of "NuScale Power's Status Update for Containment Isolation Valves and Reactor Safety Valves Design Document Audit Follow-Up Items"

REFERENCES:

1. Letter from NuScale Power, LLC to Nuclear Regulatory Commission, "NuScale Power, LLC Submittal of the NuScale Standard Plant Design Certification Application, Revision 2," dated October 30, 2018 (ML18311A006)
2. "The U.S. Nuclear Regulatory Commission Staff's Report of the Regulatory Audit of NuScale Power LLC, Design Documents for Containment Isolation Valves and Reactor Safety Valves," dated December 7, 2018 (ML18331A042)
3. Letter from NuScale Power, LLC to Nuclear Regulatory Commission, "NuScale Power, LLC Submittal of Resolution Plans for Containment Isolation Valves and Reactor Safety Valves Design Document Audit Follow-Up Items," dated January 31, 2019 (ML19031C973)

The purpose of this letter is to provide the NRC with a status update regarding follow-up items recorded in the NRC Audit Report (Reference 2) as agreed to by NuScale in the closure plan (Reference 3). The attachment to this letter provides that status information.

This letter makes no regulatory commitments or revisions to any existing regulatory commitments.

If you have any questions, please contact Rebecca Norris at 541-602-1260 or at rnorris@nuscalepower.com.

Sincerely,

Zackary W. Rad
Director, Regulatory Affairs
NuScale Power, LLC

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Attachment: NuScale Power's Status Update for Containment Isolation Valves and Reactor Safety Valves Design Document Audit Follow-Up Items

NuScale Power's Status Update for Containment Isolation Valves and Reactor Safety Valves Design Document Audit Follow-Up Items

The following table provides NuScale's status and closure details regarding the Containment Isolation Valves and Reactor Safety Valves Design Document Audit Follow-Up Items agreed to by NuScale in Reference 3.

Issue Description	***Proposed Resolution (Action)***	***Completed Action***
Containment Isolation Valves Final Safety Analysis Report (FSAR) Updates		
Apparent inconsistency in the fourth paragraph of Section 6.2.4.2.2. The second sentence states that the PSCIVs in the Control Rod Drive System (CRDS), Containment Evacuation System (CES), and Containment Flooding and Drain System (CFDS) are designed and constructed to Class 1, while the third sentence states that these PSCIVs are designed, fabricated, constructed, tested, and inspected in accordance with ASME BPV Code, Section III, Class 2.	NuScale understands the requested FSAR change and will clarify the FSAR Section 6.2.4.2.2 text to resolve the above apparent inconsistency.	Open Action: On track to be completed as proposed. Changes are being made to FSAR Section 6.2.4.2.2 to address the Follow-Up Item. These changes will be provided to the NRC in the next revision of the FSAR.
Section 6.2.4.2.2 discusses thermal relief devices included in the design of the PSCIVs to relieve excessive pressurization. The description in the FSAR for the 10 CFR Part 50, Appendix J, containment leakage testing and 10 CFR 50.55a inservice testing (IST) program testing requires revision to include provisions for the PSCIV thermal relief valves.	NuScale understands the requested FSAR change and will update the FSAR description of 10 CFR Part 50, Appendix J containment leakage testing and the IST program to include provisions for the PSCIV thermal relief valves.	Open Action: On track to be completed as proposed. Changes are being made to FSAR Sections 3.9.6.3.2 and 6.2.4.2.2 to address the Follow-Up Item. These changes will be provided to the NRC in the next revision of the FSAR.
FSAR Section 6.2.4.2.2 requires revision to clarify whether the CIV rack and pinion mechanism or the gas cylinder will be qualified to hold the valve closed for the time period specified for its	NuScale understands the requested FSAR change and will update the FSAR to indicate how the CIV will be qualified to hold the valve closed for the time period specified for its design-basis	Open Action: On track to be completed as proposed. Changes are being made to FSAR Section 5.4.3.2.1 for DHRS valves and 6.4.2.2 for CIVs. These changes will be

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design-basis and beyond design-bases functions.	or beyond design-basis functions.	provided to the NRC in the next revision of the FSAR.
The diagrams of the include valves (such as relief and check valves) that perform safety functions for the proper performance of the CIV actuators, nitrogen gas cylinders, and hydraulic lines. Update the FSAR to identify these CIV internal valves and specify the applicable IST testing of those valves consistent with the ASME OM Code, Section IST (OM Code) provisions, such as skid-mounted components where appropriate.	NuScale understands the requested FSAR change and will update the FSAR to identify the CIV internal valves and specify the applicable IST testing of the valves.	Open Action: On track to be completed as proposed. Changes are being made to FSAR Sections 3.9.6.3.2 and 6.2.4.2.2 to address the Follow-Up Item. These changes will be provided to the NRC in the next revision of the FSAR.
Update the FSAR as required to provide the SSCIV design details to prevent pressure locking or thermal binding conditions.	NuScale understands the requested FSAR change and will update the FSAR to provide the SSCIV design details to prevent pressure locking or thermal binding conditions.	Open Action: On track to be completed as proposed. Changes are being made to FSAR section 6.2.4.2.2 to address the Follow-Up Item. These changes will be provided to the NRC in the next revision of the FSAR.
Containment Isolation Valve Design Document Updates		
The PSCIV and SSCIV Design Specifications indicate ODI-16-0221 concerning the Reactor Module Loading Specification for mechanical loads is open. This open item is required to be completed.	NuScale understands the requested specification update and will provide for audit documentation demonstrating that the CIV's accommodate piping mechanical and thermal design loads.	Action completed as proposed. SSCIV and PSCIV mechanical and thermal design loading has been updated in their respective specifications.
Document CIV hydraulic actuator sizing and settings in vendor design documents.	NuScale understands the requested document update and will provide for audit vendor documentation including the CIV actuator sizing and settings.	Action completed as proposed. CIV actuator sizing and setting design development calculations have been completed and are available for audit. These parameters will be verified by CIV prototype testing and are subject to change.
Reactor Safety Valve Design Document Updates		
Update Target Rock Drawing No. 14Z539-RSV2 to reflect	NuScale understands the requested document update and will provide the updated	Action completed as proposed. RSV design drawing indicates compliance

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the 2013 Edition of the ASME BPV Code.	document for audit, which reflects the correct ASME Code Edition.	with ASME BPVC 2013 edition, section III, subsection NB.
Revise the RSV Design Specification to correctly reflect an actuation time of 1 second.	NuScale understands the requested document update and will provide the updated specification for audit, which reflects the one second actuation time.	Action completed as proposed. RSV design drawing has been updated to an actuation time of one second.
During the NRC staff audit review of the RSV Design Specification, NuScale indicated that the design specification is intended to establish requirements but does not specify size or type. NuScale noted that the size will result from the specified flow coefficient, and the type will result from the functional requirements listed in the design specification. However, NuScale stated that the specification does not include a table that specifies the valve size. Therefore, NuScale will revise the design specification to include this information.	NuScale understands the requested document update and will provide for audit the updated specification to specify the valve size.	Action completed as proposed. RSV design specification includes valve size and type.
The RSV Design Specification indicates that ODI-15-0220 (pressure and temperature for pneumatic leak testing and hydrostatic testing), ODI-15-0329 (minimum reactor pool temperature), ODI- 15-0472 (Inservice examination requirements), 16-021 (Reactor Module Nozzle loads), and 16-0684 (pressure and temperature curves for prototype and qualification) remain open. These open items are required to be closed.	NuScale understands the requested specification update and will close the ODI or provide documentation for audit demonstrating that the RSV design adequately addresses the respective open item.	Partially open actions as described below: • ODI-15-0220 has been removed from the RSV design specification. Hydrostatic testing is specified in the RSV design specification. There is no pneumatic actuator associated with the RSV, so leak testing is not required. • ODI-15-0329 still resides in the RSV design specification. Minimum reactor pool temperature has been determined, but

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		document revisions are still pending. • ODI-15-0472 has been removed from the RSV design specification and is complete. • ODI 16-0021 has been removed from the RSV specification. New ODI 19-0008 has been opened to provide a clearer description of the required design loading needs. Piping design is not finalized, therefore, nozzle loads have not been completed. • ODI-16-0684 has been removed from the RSV specification and is complete.