LO-0320-69419



April 7, 2020

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 "Remaining Closure Items for the Emergency Core Cooling System Valve Failure Mode Effects Analysis Audit Items"
- **REFERENCES:** 1. Memorandum from Samuel Lee, U.S Nuclear Regulatory Commission to Marieliz Vera Amadiz, "U.S. Nuclear Regulatory Commission Staff Report of Regulatory Audit of Failure Modes and Effects Analysis and Other Supporting Documents for Emergency Core Cooling System Valves in the NuScale Power, LLC Design Certification Application," dated August 14, 2018 (ML18219B634)
  - NuScale Letter to NRC, "NuScale Power, LLC Submittal of Resolution Plans and Classification for ECCS Valve FMEA Audit Follow-Up Items," dated September 21, 2018 (ML18264A312)
  - NuScale Letter to NRC, "NuScale Power, LLC Submittal of Responses to ECCS Valve FMEA Audit Follow-Up Items," dated August 21, 2019 (ML19233A203)
  - NuScale Letter to NRC, "NuScale Power, LLC Submittal of ECCS Valve FMEA Audit Supplemental Items," dated October 24, 2019 (ML19297H199)
  - NuScale Letter to NRC, "NuScale Power, LLC Submittal of Changes to Final Safety Analysis Report, Section 3.9.6, 'Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves and Dynamic Restraints,' " dated November 13, 2019 (ML19317E531)

The purpose of this letter is to provide the NRC with closure information related to the emergency core cooling system valve failure mode effects analysis audit items. This documents the remaining follow-up items from the NRC Audit (Reference 1) as agreed to by NuScale Power, LLC in the closure plan (Reference 2). Closure of additional follow-up items were provided in References 3, 4 and 5. The attachment to this letter provides the remaining closure information.

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

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If you have any questions, please contact Rebecca Norris at 514-602-1260 or at RNorris@nuscalepower.com.

Sincerely, 1011l 6

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

Distribution: Gregory Cranston, NRC, OWFN-8H12 Michael Dudek, NRC, OWFN-8H12

Attachment: "Remaining Closure Items for the Emergency Core Cooling System Failure Mode Effects Analysis Audit Items"



Remaining Closure items for the Emergency Core Cooling System Valve

Failure Mode Effects Analysis Audit Items

The following table provides NuScale's status and closure details regarding the Emergency Core Cooling System (ECCS) Valve Failure Mode Effects Analysis (FMEA) Audit agreed to by NuScale.

#	Audit Follow-Up Item	Completed Action
1	NuScale will update the description of the Inservice Test (IST) program for the ECCS valves (including the subcomponent valves) in the Design Certification Application (DCA), including the planned request to depart from the ASME OM Code requirements for the Inadvertent Actuation Block (IAB) valve testing, to reflect the lessons learned from the ECCS Valve Design Demonstration Testing.	Action Completed: A Final Safety Analysis Report (FSAR), Section 3.9.6 markup was provided to the NRC in NuScale letter LO-1119- 67833, dated, November 13, 2019. The final changes were provided to the NRC in FSAR Revision 4, Errata letter dated, April 1, 2020 (ML20092L899).
	To supplement the IAB valve alternative request described in the NuScale November 13, 2019, letter, Revision 5 to the DCA will need to include, as part of the IAB valve alternative, the additional request related to stroke exercising that NuScale described after the February 4 ACRS meeting.	
2	NuScale will update the DCA provisions for the ECCS valve performance (such as the IAB valve performance attributes) to reflect the lessons learned from the ECCS Valve Design Demonstration Testing.	Action Completed: FSAR section 6.3 was modified to include ECCS block range and release setting. A markup was provided in NuScale letter LO-1019-67659, dated October 24, 2019 (ML19297H199). In addition, FSAR chapter 15 analyses were revised to reflect the ECCS block range and release setting. These changes were provided in final form in FSAR Revision 4.
3	NuScale will update the applicable ECCS valve design documents to reflect the lessons learned from the ECCS Valve Design Demonstration Testing.	Action Completed: The IAB range shift has been changed in the ECCS valve design specification document (EQ-B020-2140), and engineering change orders have been approved for other affected NuScale documents. The design changes to the ECCS valve (e.g., the change in orifice placement and sizes), have been updated in the component models and drawings maintained by the vendor.