



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 1, 2020

Mr. Zackary W. Rad  
Director, Regulatory Affairs NuScale Power, LLC.  
1100 NE Circle Boulevard, Suite 200  
Corvallis, OR 97330

SUBJECT: NUSCALE POWER, LLC, DESIGN CERTIFICATION APPLICATION  
PHASES 5 AND 6 REVIEW STATUS

Dear Mr. Rad:

The purpose of this letter is to communicate the status of the U.S. Nuclear Regulatory Commission (NRC) staff's review of the NuScale Design Certification Application (DCA). The NRC staff is currently in the process of completing Phase 5, "Advisory Committee on Reactor Safeguards (ACRS) Review of Advanced Safety Evaluation Report (SER) with No Open Items," and Phase 6, "Final SER with No Open Items." The current Phase 5 public milestone date is June 23, 2020, and the Phase 6 public milestone date is September 8, 2020. However, in February 2020, NuScale informed the NRC staff of its intent to initiate design changes. As discussed below, based on these emergent design changes and the resulting proposed schedule for submitting the revised supporting documentation, the staff has determined that the current milestone for Phase 5 will not be met and the schedule for completing Phase 6 will need to be reaffirmed.

As discussed at the public meetings with your staff on March 9, 2020 (ML20097C229), and April 1, 2020 (ML20114E216), NuScale recently determined that, under certain conditions, the emergency core cooling system (ECCS) actuated later than expected and resulted in higher containment water level accumulation than previously determined. Consequently, NuScale is implementing design changes affecting the ECCS actuation timing, and addressing potential concerns related to containment water level accumulation and downcomer dilution. This will require NuScale to revise parts of its Final Safety Analysis Report (FSAR) and associated technical and topical reports. The corresponding changes in the NRC staff's Final SER (FSER) cannot be finalized until the design changes are resolved by NuScale and reviewed by the NRC to determine whether they meet the NRC's regulations and are protective of the public health and safety and the environment. The staff is currently conducting an audit (ML20059N687) to review the revised ECCS actuation setpoints. The audit is essential for allowing the staff to quickly review the information and engage with NuScale to understand and assess the safety significance of issues. This audit will continue until the staff completes its safety review.

NuScale has stated that all of the final design changes and supporting information referenced above will be submitted to the NRC staff by May 20, 2020. Following the submittal of the final design information to the NRC, the staff will complete its analyses and engage with the ACRS in June and July. As a result, Phase 5 is anticipated to be completed by July 31, 2020, rather than by June 23, 2020.

Additionally, the staff will reaffirm whether the Phase 6 milestone can be maintained after receiving the May 20, 2020, submittal. NuScale has stated that its schedule for submitting the design changes is predicated on taking the necessary time to maintain safety focus and ensure quality. The NRC appreciates NuScale's positive safety culture as demonstrated by its prompt notification to NRC of the need for the design changes and its open communications on the efforts to complete the safety analyses needed. In a public meeting on April 15, 2020 (ML20114E019), the NRC staff discussed with NuScale the information it expects to receive and the dates by which it must be received. In order to maintain the Phase 6 milestone, it is vital that the NRC receive timely and high-quality submittals from NuScale in accordance with these schedules.

Lastly, it is important to note that any additional changes to the NuScale design will produce additional effects on the review schedule. The NRC will continue to evaluate the review schedule as information is submitted by NuScale. If you have any questions, please contact me at (301) 415-1560 or via e-mail at [Anna.Bradford@nrc.gov](mailto:Anna.Bradford@nrc.gov).

Sincerely,

Anna H. Bradford, Director,  
Division of New and Renewed Licenses,  
Office of Nuclear Reactor Regulation

Docket No. 52-048

cc: DC NuScale Listserv

