

**From:** [Taylor, Robert](#)  
**To:** [Riccardella, Peter](#)  
**Cc:** [Moore, Scott](#); [Burkhart, Larry](#); [Snodderly, Michael](#); [Bradford, Anna](#); [Nieh, Ho](#); [Caldwell, Bob](#); [Dudek, Michael](#); [Cranston, Greg](#); [Bavol, Bruce](#)  
**Subject:** Response to ACRS" September 20, 2019 Letter on NuScale Topical Report TR-0516-49417-P  
**Date:** Thursday, October 31, 2019 8:31:59 AM

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Dear Chairman Riccardella,

In your letter dated September 20, 2019 (ML19266A463), ACRS reported on the Committee's review of the staff's safety evaluation for the NuScale topical report TR-0516-49417-P, Revision 0, "Evaluation Methodology for Stability Analysis of the NuScale Power Module."

Your letter contained the following two conclusions and recommendations:

(1) When used in compliance with the 16 limitations imposed by the staff, the methods documented in this stability topical report are acceptable for performing stability analyses of the NuScale power module (NPM). The safety evaluation (SE) should be issued.

(2) Prototypical steam generator tests and scoping staff analyses show that two phase density-wave flow oscillations inside the tubes are possible with the current design, which could challenge thermal fatigue limits. NuScale and the staff are aware of the issue and are committed to resolving it prior to completion of the review.

The NRC staff appreciates the ACRS's review and recommendations and plans to issue the approved version of the topical report by mid-January 2020. Additionally, the NRC staff agrees with conclusion and recommendation (2). The staff and NuScale will work to ensure that the design basis includes the density-wave oscillations phenomenon, so that it is captured and will be completed as part of the American Society of Mechanical Engineers code design requirements for the steam generator tubes.

The NRC staff appreciates your review of this safety evaluation and looks forward to future interactions with the Committee as part of its NuScale review activities.

Best regards,

Rob

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