

## NuScaleDCRaisPEm Resource

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**From:** Cranston, Gregory  
**Sent:** Tuesday, April 25, 2017 12:48 PM  
**To:** RAI@nuscalepower.com  
**Cc:** NuScaleDCRaisPEm Resource; Karas, Rebecca; Lee, Samuel; Burja, Alexandra; Franovich, Rani; Chowdhury, Prosanta  
**Subject:** Request for Additional Information No. 09 (eRAI No. 8765) Section 15.04.03 (SRSB)  
**Attachments:** Request for Additional Information No. 09 (eRAI No. 8765).pdf

Attached please find NRC staff's request for additional information concerning review of the NuScale Design Certification Application.

Please submit your response within 60 days of the date of this RAI to the NRC Document Control Desk.

If you have any questions, please contact me.

Thank you.

Gregory Cranston, Senior Project Manager  
Licensing Branch 1 (NuScale)  
Division of New Reactor Licensing  
Office of New Reactors  
U.S. Nuclear Regulatory Commission  
301-415-0546

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## **Request for Additional Information No. 09 (eRAI No. 8765)**

Issue Date: 04/25/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 15.04.03 - Control Rod Misoperation (System Malfunction or Operator Error)

Application Section: 15.4

### **QUESTIONS**

#### **15.04.03-1**

Standard Review Plan (SRP) Section 15.4.3, "Control Rod Misoperation (System Malfunction or Operator Error)," provides guidance for complying with Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criteria 10, "Reactor design"; 13, "Instrumentation and control"; 20, "Protection system functions"; and 25, "Protection system requirements for reactivity control malfunctions." SRP Section 15.4.3 directs the reviewer to review results of the analyses, including, in part, plots of critical heat flux for the limiting fuel rod. This is necessary to confirm compliance with the aforementioned GDC.

FSAR Tier 2, Figure 15.4-27 is titled "Critical Heat Flux Ratio (15.4.3 Control Rod Misoperation, Control Rod Assembly drop)," but it appears to show fuel reactivity instead. As a result, no plot of critical heat flux ratio (CHFR) is provided for FSAR Section 15.4.3. To demonstrate compliance with GDC 10, 13, 20, and 25, please add a plot of CHFR to the FSAR and correct the title of FSAR Tier 2, Figure 15.4-27.