

## NuScaleDCRaisPEm Resource

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**From:** Chowdhury, Prosanta  
**Sent:** Saturday, March 10, 2018 7:29 PM  
**Cc:** Lee, Samuel; Cranston, Gregory; Murray, Demetrius; Rivera-Varona, Aida; NuScaleDCRaisPEm Resource  
**Subject:** Request for Additional Information No. 382 eRAI No. 9402 (Ch. 18)  
**Attachments:** Request for Additional Information No. 382 (eRAI No. 9402).pdf

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

Please submit your technically correct and complete 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.

Prosanta Chowdhury, Project Manager  
Licensing Branch 1 (NuScale)  
Division of New Reactor Licensing  
Office of New Reactors  
U.S. Nuclear Regulatory Commission  
301-415-1647

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**Options**

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## **Request for Additional Information No. 382 (eRAI No. 9402)**

Issue Date: 03/10/2018

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 18 - Human Factors Engineering

Application Section:

### **QUESTIONS**

18-20

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 52.47(a)(8) requires an applicant for a design certification to provide a final safety analysis report (FSAR) that must include the information necessary to demonstrate compliance with any technically relevant portions of the Three Mile Island requirements set forth in 10 CFR 50.34(f), except paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v). Section 10 CFR 50.34(f)(2)(iii) requires an applicant to "Provide, for Commission review, a control room design that reflects state-of-the-art human factor principles prior to committing to fabrication or revision of fabricated control room panels and layouts." Chapter 18, "Human Factors Engineering," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," and NUREG-0711, "Human Factors Engineering Program Review Model," identify criteria the staff uses to evaluate whether an applicant meets the regulation. The FSAR, Tier 2, Section 18.0, "Human Factors Engineering - Overview," indicates that the HFE program incorporates the applicable guidance provided in NUREG-0711, Revision 3.

Chapter 18, "Human Factors Engineering," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," lists NUREG-0711, "Human Factors Engineering Program Review Model," and NUREG-0700, "Human-System Interface Design Review Guidelines," as the sources of acceptance criteria the staff uses to evaluate whether an applicant meets the regulation.

NUREG-0711, Section 8.4.4.6(1), states that, "The applicant should describe the basis for deciding which HSIs will be included in the MCR design, and which will be provided locally."

The staff reviewed the application and could not find where NuScale addressed this criterion. Describe the basis NuScale used for deciding which HSIs to include in the MCR and which to provide locally or why this criterion does not apply to the NuScale design.