NuScaleDCRaisPEm Resource

From: Chowdhury, Prosanta
Sent: Tuesday, May 1, 2018 3:49 PM
To: Request for Additional Information
Cc: Lee, Samuel; Cranston, Gregory; Franovich, Rani; Karas, Rebecca; Schmidt, Jeffrey; NuScaleDCRaisPEm Resource
Subject: RE: Request for Additional Information No. 453 eRAI No. 9500 (15)
Attachments: Request for Additional Information No. 453 (eRAI No. 9500).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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From: Chowdhury, Prosanta

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Request for Additional Information No. 453 (eRAI No. 9500)
Issue Date: 05/01/2018
Application Title: NuScale Standard Design Certification - 52-048
Operating Company: NuScale Power, LLC
Docket No. 52-048
Review Section: 15 - Introduction - Transient and Accident Analyses
Application Section:

QUESTIONS

15-10

General Design Criterion 10, "*Reactor design,*" requires that the reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences. NuScale DSRS Section 15.0 directs the staff to ensure that the range of values for plant parameters used in the safety evaluation is sufficiently broad to cover the predicted fuel cycle ranges and assumes the appropriate conditions, within the operating band, as initial conditions for transient analysis.

Final Safety Analysis Report (FSAR) Table 15.0-6 establishes the range of initial conditions that are assumed in the Section 15 transient and accident analyses. The values presented in Table 15.0-6 are common to all Chapter 15 events except where noted in the individual sections. In general, Table 15.0-6 establishes the range of conditions at hot full power conditions as these are typically the limiting initial conditions relative to the acceptance criteria. While generally true, the staff notes that some FSAR Section 15 events are evaluated at hot zero power (HZP) conditions with no corresponding entry in Table 15.0-6. Since the minimum HZP flow rate is determined by either decay heat or the Module Heatup System (MHS) in this design, the staff seeking justification for not including a minimum HZP reactor coolant system flow rate in FSAR Table 15.0-6, or a revision to the table.