

NuScaleTRRaisPEm Resource

From: Cranston, Gregory
Sent: Friday, June 30, 2017 3:01 PM
To: RAI@nuscalepower.com
Cc: NuScaleTRRaisPEm Resource; Lee, Samuel; Skarda, Raymond; Karas, Rebecca; Schmidt, Jeffrey; Chowdhury, Prosanta; Baval, Bruce
Subject: Topical Report (TR-0516-49417-P) - Request for Additional Information Letter No. 8873 (eRAI No. 8873)
Attachments: Request for Additional Information No. 8873 (eRAI No. 8873).pdf

Attached please find NRC staff's request for additional information concerning review of the NuScale Topical Report.

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.

Hearing Identifier: NuScale_SMR_DC_TR_Public
Email Number: 34

Mail Envelope Properties (e2443b4e3ff34c1e9bb58391cfcda5a1)

Subject: Topical Report (TR-0516-49417-P) - Request for Additional Information Letter No. 8873 (eRAI No. 8873)
Sent Date: 6/30/2017 3:00:37 PM
Received Date: 6/30/2017 3:00:39 PM
From: Cranston, Gregory

Created By: Gregory.Cranston@nrc.gov

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| Files | Size | Date & Time | |
|---|-------------|------------------------|-------|
| MESSAGE | 307 | 6/30/2017 3:00:39 PM | |
| Request for Additional Information No. 8873 (eRAI No. 8873).pdf | | | 89122 |

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received:

Request for Additional Information No. 8873 (eRAI No. 8873)

Issue Date: 06/30/2017

Application Title: NuScale Topical Report

Operating Company: NuScale

Docket No. PROJ0769

Review Section: 01 - Introduction and Interfaces

Application Section: 1

QUESTIONS

01-17

In accordance with 10 CFR 50 Appendix A GDC 10, "Reactor design," 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. The Standard Review Plan (SRP) 15.0.2 acceptance criteria with respect to evaluation models includes the requirement that the chosen mathematical models and the numerical solution of those models must be able to predict the important physical phenomena reasonably well from both qualitative and quantitative points of view.

Section 5.6.2, "Decay Heat" of the topical report (TR), TR-0516-49417-P, states that the decay heat is treated as a static power level in the calculations. Section 8.2.2.2, "Event at 32 MW Conditions with 35 Percent Initial Decay Heat," of the TR refers to sensitivity calculations performed at various levels of decay heat. It is not clear how the user determines an appropriate input, percentage of the initial thermal power, for licensing calculations using PIM.

In order to make an affirmative finding associated with the above regulatory requirement important to safety, NRC staff requests NuScale to describe the method for determining an appropriate decay heat level input for licensing calculations.