

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Saturday, August 12, 2017 1:16 PM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Dias, Antonio; Dinh, Thinh; Vera Amadiz, Marieliz
Subject: RE: Request for Additional Information No. 173, RAI 9040 (3.4.1)
Attachments: Request for Additional Information No. 173 (eRAI No. 9052).pdf

Attached please find NRC staff's request for additional information 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.

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

Hearing Identifier: NuScale_SMR_DC_RAI_Public
Email Number: 196

Mail Envelope Properties (d835ab9d98d641b79d893318135bb47b)

Subject: RE: Request for Additional Information No. 173, RAI 9040 (3.4.1)
Sent Date: 8/12/2017 1:15:30 PM
Received Date: 8/12/2017 1:15:34 PM
From: Cranston, Gregory

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| Files | Size | Date & Time |
|--|-------------|------------------------|
| MESSAGE | 555 | 8/12/2017 1:15:34 PM |
| Request for Additional Information No. 173 (eRAI No. 9052).pdf | | 27648 |

Options

Priority: Standard

Return Notification: No

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Sensitivity: Normal

Expiration Date:

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Request for Additional Information No. 173 (eRAI No. 9052)

Issue Date: 08/12/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.04.01 - Internal Flood Protection for Onsite Equipment Failures

Application Section: 3.4

QUESTIONS

03.04.01-1

10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

Regulatory Guide 1.189 suggests fire suppression activity duration to be 2 hours with a flow rate of 500 gpm hose stream, plus the largest design demand of any sprinkler or deluge system. However, in the NuScale flooding analysis, the applicant assumed that the fire suppression activity discharges for the Reactor Building (RXB) and Control Room Building (CRB) are 700 gpm and 550 gpm, respectively, and the fire suppression duration for the CRB is limited to 60 minutes.

The applicant is requested provide justifications for the flow assumptions related to the bounding fire suppression conditions for all areas in the RXB and CRB.