

## NuScaleDCRaisPEm Resource

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**From:** Chowdhury, Prosanta  
**Sent:** Friday, April 13, 2018 8:29 AM  
**To:** Request for Additional Information  
**Cc:** Lee, Samuel; Cranston, Gregory; Tabatabai, Omid; Lupold, Timothy; Huang, Jason; NuScaleDCRaisPEm Resource  
**Subject:** Request for Additional Information No. 420 eRAI No. 9459 (03.08.02)  
**Attachments:** Request for Additional Information No. 420 (eRAI No. 9459).pdf

Resending with corrected RAI No. (420 instead of 417) on the subject line..

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**From:** Chowdhury, Prosanta  
**Sent:** Wednesday, April 11, 2018 8:15 PM  
**To:** 'Request for Additional Information' <RAI@nuscalepower.com>  
**Cc:** Lee, Samuel <Samuel.Lee@nrc.gov>; Cranston, Gregory <Gregory.Cranston@nrc.gov>; Tabatabai, Omid <Omid.Tabatabai-Yazdi@nrc.gov>; Lupold, Timothy <Timothy.Lupold@nrc.gov>; Huang, Jason <Jason.Huang@nrc.gov>; NuScaleDCRaisPEm Resource <NuScaleDCRaisPEm.Resource@nrc.gov>  
**Subject:** Request for Additional Information No. 417 eRAI No. 9459 (03.08.02)

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

**Hearing Identifier:** NuScale\_SMR\_DC\_RAI\_Public  
**Email Number:** 454

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**Subject:** Request for Additional Information No. 420 eRAI No. 9459 (03.08.02)  
**Sent Date:** 4/13/2018 8:28:47 AM  
**Received Date:** 4/13/2018 8:28:56 AM  
**From:** Chowdhury, Prosanta

**Created By:** Prosanta.Chowdhury@nrc.gov

**Recipients:**

"Lee, Samuel" <Samuel.Lee@nrc.gov>  
Tracking Status: None  
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Tracking Status: None  
"Huang, Jason" <Jason.Huang@nrc.gov>  
Tracking Status: None  
"NuScaleDCRaisPEm Resource" <NuScaleDCRaisPEm.Resource@nrc.gov>  
Tracking Status: None  
"Request for Additional Information" <RAI@nuscalepower.com>  
Tracking Status: None

**Post Office:** BN7PR09MB2609.namprd09.prod.outlook.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1132	4/13/2018 8:28:56 AM
Request for Additional Information No. 420 (eRAI No. 9459).pdf		11966

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

## **Request for Additional Information No. 420 (eRAI No. 9459)**

Issue Date: 04/12/2018

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.08.02 - Steel Containment

Application Section:

### QUESTIONS

03.08.02-18

10 CFR 52.47 requires the design certification applicant to include a description and analysis of the structures, systems, and components with sufficient detail to permit understanding of the system designs. Regulatory Guide 1.216 C.1.k states the details of the analysis and results that should be submitted in report form.

For the CNV Middle Section Model, in Section 3.4 of TR-0917-56119-P, "CNV Ultimate Pressure Integrity," it states that the design was modified to add 7.5 inches of reinforcement around the pressurizer access port opening on the inside surface of the CNV. The report stated that the added reinforcement served to stiffen the CNV shell around the opening and produce less distortion of the access flange, however the addition of the 7.5 inches of reinforcement is not clearly indicated in the drawings of the technical report, nor are there any further details on the reinforcement and its effect on the analysis. Please clearly show the reinforcement on the drawings of the technical report.

It does not appear that the analysis of the CNV Middle Section was re-evaluated to include this 7.5 inches of reinforcement. Please explain why this analysis was not re-evaluated as the reinforcement could produce a different bounding ultimate pressure than is currently indicated in the FSAR.

The RPV support design and RPV lateral support design, which impart stress to the shell of the containment vessel, were both modified since the completion of the containment ultimate pressure analysis. Please include drawings within the technical report that clearly show the differences in design from the one used for the ultimate pressure analysis (for example Figure 3-3) and the current design, to support the statements made that these design changes do not affect the ultimate pressure capacity or buckling results.