

NuScaleDCRaisPEm Resource

From: Cranston, Gregory
Sent: Saturday, August 12, 2017 8:01 AM
To: RAI@nuscalepower.com
Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Samaddar, Sujit; Istar, Ata; Vera Amadiz, Marieliz
Subject: RE: Request for Additional Information No. 169, RAI 8992 (3.8.5)
Attachments: Request for Additional Information No. 169 (eRAI No. 8992).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.

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Licensing Branch 1 (NuScale)
Division of New Reactor Licensing
Office of New Reactors
U.S. Nuclear Regulatory Commission
301-415-0546

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Request for Additional Information No. 169 (eRAI No. 8992)

Issue Date: 08/12/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 03.08.05 - Foundations

Application Section: 3.8.5

QUESTIONS

03.08.05-3

10 CFR Part 50, Appendix A, General Design Criteria (GDC) 1, 2, 4 and 5 provide the regulatory requirements for the design of the seismic Category I structures. DSRS Section 3.8.5 provides review guidance pertaining to stability evaluation of foundations.

FSAR Tier 2, Section "3.8.5.6.1.1, RXB Uplift, states "As shown in Section 3.8.5.4.1.4, ... The [factor of safety] FOS for flotation is shown in Table 3.8.5-5 for each of the 16 cases considered,... For each of the cases, an acceptable FOS for overturning was met." The staff found that the reference Section 3.8.5.4.1.4 was incorrectly cited because Section 3.8.5.4.1.4 is entitled "Control Building Basemat Nonlinear Analysis Model Description," and the correct reference should be Section 3.8.5.5.1, "Flotation and Uplift Stability Analysis Approach." Therefore, please correct the error.

03.08.05-4

10 CFR Part 50, Appendix A, General Design Criteria (GDC) 1, 2, 4 and 5 provide the regulatory requirements for the design of the seismic Category I structures. DSRS Section 3.8.5 provides review guidance pertaining to stability evaluation of foundations.

FSAR Section 3.8.5.4.1.4 "Control Building Basemat Nonlinear Analysis Model Description," states "...ANSYS structural analysis model including joints, frame elements, shell elements, solid elements and links/supports is shown in Table 3.8.5-13." The staff finds that the referenced Table 3.8.5-13 did not provide any information related to the "ANSYS structural analysis model." However, Table 3.8.5-11 might be the correct table to reference. Therefore, address this inconsistency.