

August 22, 2018

Docket: PROJ0769

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

SUBJECT: NuScale Power, LLC Supplemental Response to NRC Request for Additional Information No. 9351 (eRAI No. 9351) on the NuScale Topical Report, "Non-Loss of Coolant Accident Analysis Methodology," TR-0516-49416, Revision 1

REFERENCES: 1. U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 9351 (eRAI No. 9351)," dated May 14, 2018
2. NuScale Power, LLC Response to NRC "Request for Additional Information No. 9351 (eRAI No.9351)," dated July 13, 2018
3. NuScale Topical Report, "Non-Loss of Coolant Accident Analysis Methodology," TR-0516-49416, Revision 1, dated August 2017

The purpose of this letter is to provide the NuScale Power, LLC (NuScale) supplemental response to the referenced NRC Request for Additional Information (RAI).

The Enclosures to this letter contain NuScale's supplemental response to the following RAI Question from NRC eRAI No. 9351:

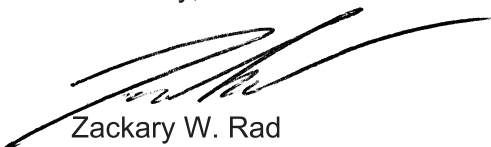
- 15.00.02-33

Enclosure 1 is the proprietary version of the NuScale Supplemental Response to NRC RAI No. 9351 (eRAI No. 9351). NuScale requests that the proprietary version be withheld from public disclosure in accordance with the requirements of 10 CFR § 2.390. The enclosed affidavit (Enclosure 3) supports this request. Enclosure 2 is the nonproprietary version of the NuScale response.

This letter and the enclosed responses make no new regulatory commitments and no revisions to any existing regulatory commitments.

If you have any questions on this response, please contact Paul Infanger at 541-452-7351 or at pinfanger@nuscalepower.com.

Sincerely,



Zackary W. Rad
Director, Regulatory Affairs
NuScale Power, LLC



Distribution: Gregory Cranston, NRC, OWFN-8G9A
Samuel Lee, NRC, OWFN-8G9A
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Enclosure 1: NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 9351, proprietary

Enclosure 2: NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 9351, nonproprietary

Enclosure 3: Affidavit of Zackary W. Rad, AF-0818-61504

Enclosure 1:

NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 9351,
proprietary

Enclosure 2:

NuScale Supplemental Response to NRC Request for Additional Information eRAI No. 9351,
nonproprietary

Response to Request for Additional Information Docket No. 52-048

eRAI No.: 9351

Date of RAI Issue: 05/14/2018

NRC Question No.: 15.00.02-33

TR-0516-49416-P supports the conclusions in the NuScale FSAR, which under 10 CFR 52.47 must describe the facility, present the design bases and the limits on its operation, and present a safety analysis of the structures, systems, and components and of the facility as a whole. Chapter 15 of SRP describes a subset of the transient and accident events that should be considered in the safety analyses. DSRS Section 15.0 directs the staff to verify that the implementation of models or codes is within the applicable ranges and conditions. Additionally, 10 CFR 50.43(e) states that applications that use simplified, inherent, passive, or other innovative means to accomplish their safety functions will be approved only if sufficient data exist on the safety features of the design to assess the analytical tools used for safety analyses over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences.

RG 1.203 describes the EMDAP, which the NRC staff considers acceptable for use in developing and accessing EMs used to analyze transient and accident behavior. Step 7 of this process (described in RG 1.203, Section C.1.2.3) discusses an applicant's identification and performance of separate effects tests and integral effects tests to complete the database against which the EM will be assessed. Furthermore, Step 17 (Section C.1.4.5 of RG 1.203) discusses the determination of the applicability of the model to simulate system components and states that before performing integrated analyses, an applicant should determine the various EM options, special models, and inputs to have the inherent capability to model the major systems and subsystems required for the particular application.

Based on the staff's audit of document {{

}}^{2(a),(b),(c)} and audit discussions with the applicant, the primary flow in the SIET TF-2 NRELAP5 model {{

}}^{2(a),(b),(c)}.

{{

}}^{2(a),(b),(c)}.

Reliance upon incorrect primary flow rate information in the assessment could lead to incorrect conclusions regarding the code capability and code models. Therefore, the NRC staff requests the applicant to please confirm whether or not {{^{2(a),(b),(c)} was active during any of the tests. If it was active, either (a) revise the assessment to account for the correct flow rates if it does not already, or (b) justify the acceptability of the current assessment. In addition:

- a. The staff requests the applicant to provide the primary flow rates used for all SIET validation cases documented in LOCA TR Section 7.4.2 as input to the SIET NRELAP5 model and explain whether they included {{^{2(a),(b),(c)}.

- b. The staff requests the applicant to explain {{

}}^{2(a),(b),(c)}.

- c. Update TR-0516-49416-P, Section 7.4 of TR-0516-49422-P, "Loss-of-Coolant Accident Evaluation Model," and any other documents as appropriate, based on your responses.

NuScale Response:

The original response to RAI 9351, 15.00.02-33 contained these statements: "Some of the cases {{

}}^{2(a),(b),(c)} are not included in the revised assessment for SIET TF-2 tests. The basis for the excluded test cases will be addressed in a supplement to this response that will be submitted concurrently with the response to RAI 9158 15.00.02-5."

The basis for excluding the aforementioned test cases was included in the response to RAI 9158, 15.00.02-5 submitted in NuScale letter RAIO-0818-61404, dated August 16, 2018.

Impact on DCA:

There are no impacts to the DCA as a result of this response.



RAIO-0818-61503

Enclosure 3:

Affidavit of Zackary W. Rad, AF-0818-61504

NuScale Power, LLC
AFFIDAVIT of Zackary W. Rad

I, Zackary W. Rad, state as follows:

1. I am the Director, Regulatory Affairs of NuScale Power, LLC (NuScale), and as such, I have been specifically delegated the function of reviewing the information described in this Affidavit that NuScale seeks to have withheld from public disclosure, and am authorized to apply for its withholding on behalf of NuScale.
2. I am knowledgeable of the criteria and procedures used by NuScale in designating information as a trade secret, privileged, or as confidential commercial or financial information. This request to withhold information from public disclosure is driven by one or more of the following:
 - a. The information requested to be withheld reveals distinguishing aspects of a process (or component, structure, tool, method, etc.) whose use by NuScale competitors, without a license from NuScale, would constitute a competitive economic disadvantage to NuScale.
 - b. The information requested to be withheld consists of supporting data, including test data, relative to a process (or component, structure, tool, method, etc.), and the application of the data secures a competitive economic advantage, as described more fully in paragraph 3 of this Affidavit.
 - c. Use by a competitor of the information requested to be withheld would reduce the competitor's expenditure of resources, or improve its competitive position, in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
 - d. The information requested to be withheld reveals cost or price information, production capabilities, budget levels, or commercial strategies of NuScale.
 - e. The information requested to be withheld consists of patentable ideas.
3. Public disclosure of the information sought to be withheld is likely to cause substantial harm to NuScale's competitive position and foreclose or reduce the availability of profit-making opportunities. The accompanying Request for Additional Information response reveals distinguishing aspects about the method by which NuScale develops its non-loss of coolant accident analysis methodology.

NuScale has performed significant research and evaluation to develop a basis for this method and has invested significant resources, including the expenditure of a considerable sum of money.

The precise financial value of the information is difficult to quantify, but it is a key element of the design basis for a NuScale plant and, therefore, has substantial value to NuScale.

If the information were disclosed to the public, NuScale's competitors would have access to the information without purchasing the right to use it or having been required to undertake a similar expenditure of resources. Such disclosure would constitute a misappropriation of NuScale's intellectual property, and would deprive NuScale of the opportunity to exercise its competitive advantage to seek an adequate return on its investment.

4. The information sought to be withheld is in the enclosed response to NRC Request for Additional Information No. 9351, eRAI 9351. The enclosure contains the designation "Proprietary" at the top of each page containing proprietary information. The information considered by NuScale to be proprietary is identified within double braces, "{{ }}" in the document.
5. The basis for proposing that the information be withheld is that NuScale treats the information as a trade secret, privileged, or as confidential commercial or financial information. NuScale relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC § 552(b)(4), as well as exemptions applicable to the NRC under 10 CFR §§ 2.390(a)(4) and 9.17(a)(4).
6. Pursuant to the provisions set forth in 10 CFR § 2.390(b)(4), the following is provided for consideration by the Commission in determining whether the information sought to be withheld from public disclosure should be withheld:
 - a. The information sought to be withheld is owned and has been held in confidence by NuScale.
 - b. The information is of a sort customarily held in confidence by NuScale and, to the best of my knowledge and belief, consistently has been held in confidence by NuScale. The procedure for approval of external release of such information typically requires review by the staff manager, project manager, chief technology officer or other equivalent authority, or the manager of the cognizant marketing function (or his delegate), for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside NuScale are limited to regulatory bodies, customers and potential customers and their agents, suppliers, licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or contractual agreements to maintain confidentiality.
 - c. The information is being transmitted to and received by the NRC in confidence.
 - d. No public disclosure of the information has been made, and it is not available in public sources. All disclosures to third parties, including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or contractual agreements that provide for maintenance of the information in confidence.
 - e. Public disclosure of the information is likely to cause substantial harm to the competitive position of NuScale, taking into account the value of the information to NuScale, the amount of effort and money expended by NuScale in developing the information, and the difficulty others would have in acquiring or duplicating the information. The information sought to be withheld is part of NuScale's technology that provides NuScale with a competitive advantage over other firms in the industry. NuScale has invested significant human and financial capital in developing this technology and NuScale believes it would be difficult for others to duplicate the technology without access to the information sought to be withheld.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 22, 2018.



Zackary W. Rad