

August 15, 2022

Docket No. 99902078

U.S. Nuclear Regulatory Commission  
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11555 Rockville Pike  
Rockville, MD 20852-2738

**SUBJECT:** NuScale Power, LLC Submittal of NuScale NPM-20 250 MWt Standard Design Approval Application Status Report

**REFERENCES:** 1. Letter from NuScale Power to NRC, "NuScale Power, LLC Submittal of 'NuScale 250 MWt Standard Design Approval Regulatory Engagement Plan,' PL-0002-66070, Revision 2," dated February 16, 2021 (ML21047A475)

2. Letter from NuScale Power to NRC, "NuScale Power, LLC Submittal of NuScale NPM-20 250 MWt Standard Design Approval Application Status Report," dated May 12, 2022 (ML2213A312)

NuScale Power, LLC (NuScale) submitted the NuScale 250 MWt Standard Design Approval (SDA) Regulatory Engagement Plan (REP), Revision 2, in Reference 1. In the plan, NuScale stated its intent to submit periodic updates to the NRC summarizing engagements, submittals, notable project milestones, and future NPM-20 SDA-related activities. The most recent of these summaries is listed as Reference 2. The purpose of this submittal is to provide an update for the period of May 2022 through July 2022 related to NuScale's preparation of the NPM-20 SDA Application (SDAA).

Enclosure 1 is the proprietary version of the "NuScale SDAA Current and Future Activities." NuScale requests that the proprietary version be withheld in accordance with the requirements of 10 CFR § 2.390. The affidavit (Enclosure 3) supports this request. Enclosure 2 is the nonproprietary version.

This letter makes no regulatory commitments and no revisions to any existing regulatory commitments.

If you have any questions, please contact Mark Shaver at 541-360-0630 or at [mshaver@nuscalepower.com](mailto:mshaver@nuscalepower.com).

Sincerely,



Carrie Fosaaen  
Director, Regulatory Affairs  
NuScale Power, LLC

Distribution: Brian Smith, NRC  
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Enclosure 1: "NuScale SDAA Current and Future Activities," proprietary version  
Enclosure 2: "NuScale SDAA Current and Future Activities," nonproprietary version  
Enclosure 3: Affidavit of Carrie Fosaaen, AF-123763

**Enclosure 1:**

“NuScale SDAA Current and Future Activities,” proprietary version

**Enclosure 2:**

“NuScale SDAA Current and Future Activities,” nonproprietary version

## Recent Activities

The following is a summary of activities that were completed or are ongoing in the reporting period of May through July 2022. This report includes the work on the EPZ LTR, which is a first-of-a-kind project that is not referenced in the Standard Design Approval application (SDAA). Acronyms are listed below.

- ACRS – Advisory Committee on Reactor Safeguards
- CHF – critical heat flux
- DC – direct current
- EPZ – emergency planning zone
- FSAR – Final Safety Analysis Report
- LTR – topical report
- NA – not applicable
- NIST – NuScale Integral Test System
- NRC – Nuclear Regulatory Commission
- P&I – planning and information
- PRA – probabilistic risk assessment
- RAI – request for additional information
- REA – rod ejection accident

Date	Topic	Follow-up Actions	Status
May 2, 2022	Comments on Draft Regulatory Guide DG-5061, “Cyber Security Programs for Nuclear Power Reactors”	None	NA
May 3, 2022	Closure of EPZ Audit	Submit LTR revision	Complete
May 4, 2022	Pre-Application Meeting: Treatment of DC Power in Safety Analysis LTR	Additional pre-application meeting	Complete
May 9, 2022	Comments on Draft Regulatory Guide DG-1400 “Qualification of Class 1E Connection Assemblies for Production and Utilization Facilities”	None	NA
May 17, 2022	Clarification Call: CHF LTR (eRAI 9899)	Submit RAI response	Complete
May 25, 2022	Submittal of pre-application Readiness Assessment request	Receive NRC acknowledgment	Complete
May 31, 2022	Clarification Call: EPZ LTR Revision	Submit LTR revision	Complete

<b>Date</b>	<b>Topic</b>	<b>Follow-up Actions</b>	<b>Status</b>
Jun 10, 2022	Submittal of NuScale response to eRAI 9828 for EPZ LTR, and EPZ LTR Revision 3	ACRS meetings	Planned
Jun 15, 2022	P&I Meeting: Branch Chief briefing to prep for June 22 ACRS meeting	ACRS meeting	Complete
Jun 21, 2022	Comments on Draft Regulatory Guide DG-1389 "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors"	None	NA
Jun 22, 2022	ACRS Subcommittee Meeting: US460 Design and SDAA Overview	None	NA
Jun 23, 2022	Pre-Application Meeting: Updates to PRA and Implementation of Risk Significance Determination	None	NA
Jun 29, 2022	Clarification Call: Chapter 18	None	NA
Jun 30, 2022	P&I Meeting: Readiness Assessment administration	Schedule readiness assessments	In progress
Jul 12, 2022	P&I Meeting: Part 8 - Inspections, Tests, Analyses, and Acceptance Criteria	None	NA
Jul 13, 2022	Clarification Call: REA LTR (eRAI 9936)	NuScale post response	In progress
Jul 13, 2022	Entrance Meeting: Statistical Subchannel Analysis Methodology LTR audit	Complete audit	In progress
Jul 20, 2022	Submittal of NuScale response to eRAI 9899 for CHF LTR	None	Complete
Jul 25, 2022	Pre-Application Meeting: Density Wave Oscillation LTR and testing at SIET facility	Testing	In progress
Jul 26, 2022	Entrance Meeting: Readiness Assessment for FSAR Section 3.2 and Chapter 17	Exit meeting	Complete

Date	Topic	Follow-up Actions	Status
Jul 27, 2022	Pre-Application Meeting: DC Power in Chapter 15 Safety Analysis	Chapter 15 readiness assessment	In progress
Jul 28, 2022	Pre-Application Meeting: Loss-of-Coolant Accident LTR	Submit LTR	In progress

### Requests for Additional Information (RAIs)

The following is a summary of RAIs that were completed or are ongoing in the reporting period:

eRAI	Associated Document	Status
9828	EPZ LTR	Complete
9899	CHF LTR	Complete
9936	REA LTR	NuScale review

### Activities in Next Reporting Period

The following are NuScale's forecasted activities for August 2022 through October of 2022. In the below table, dates on future NuScale submittals are only proprietary until the document is submitted, and dates on future public meetings are only proprietary until the meeting is published on the NRC website. The proprietary marking on this table, if any, should not prevent the public notification of a meeting once the schedule is agreed upon by all parties.

Target Date	Topic
Aug 1-12, 2022	Readiness Assessment for FSAR Chapters 2 and 10
Aug 5, 2022	Exit Meeting: Readiness Assessment for FSAR Section 3.2 and Chapter 17
Aug 8-19, 2022	Readiness Assessment for FSAR Chapters 7 and 8 (except 8.3)
Aug 11, 2022	Pre-Application Meeting: Quality Assurance Program Description LTR
Aug 15-26, 2022	Readiness Assessment for FSAR Section 9.3.4, and Chapters 11 and 13

Target Date	Topic
Aug 24, 2022	Pre-Application Meeting: Non-Loss-of-Coolant Accident LTR
Aug 29 – Sep 12, 2022	Readiness Assessment for FSAR Sections 9.1, 9.5, and 9.A, and Chapters 4 and 5
Sep 8, 2022	ACRS Subcommittee Meeting: EPZ LTR
{{	}} <sup>2(c),(d)</sup>
Sep 19, 2022	Entrance Meeting: Readiness Assessment for FSAR Sections 6.4 and 9.2-9.4 (except 9.3.4), and Chapter 12
Sep 22, 2022	Pre-Application Meeting: Long-Term Cooling and Boron Analysis Methodology LTR
Sep 2022	Entrance Meetings: Readiness Assessments for FSAR Sections 3.3-3.13, 3.A-3.C, 8.3, Chapters 6 (except 6.4), 14, 15, 16, 18, and 19
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	}} <sup>2(c),(d)</sup>

NuScale expects to submit the next SDAA progress update by November 18, 2022.





### Topical Reports (LTRs)

The following are NuScale's planned topical reports to be submitted in support of the SDAA. In the below table, dates on future public meetings are only proprietary until the meeting is published on the NRC website. The proprietary markings on this table, if any, should not prevent the public notification of a meeting once the schedule is agreed upon by all parties.

Licensing Topical Report	Type	Pre-Application Engagement Date
Loss-of-Coolant Accident, Containment Response Analysis, and Inadvertent Operation of a Reactor Valve Evaluation Methodology	Revision 3 of TR-0516-49422	Complete
Quality Assurance Program Description	New	Complete
Non-Loss-of-Coolant Accident Analysis Methodology	Revision 4 to TR-0516-49416	Aug 24, 2022
Long Term Cooling and Boron Distribution Methodology	New	Sep 22, 2022
Density Wave Oscillation Methodology	New	{{  }} <sup>2(c),(d)</sup>

**Enclosure 3:**

Affidavit of Carrie Fosaaen, AF-123763

## **NuScale Power, LLC**

### **AFFIDAVIT of Carrie Fosaaen**

I, Carrie Fosaaen, state as follows:

- (1) I am the Acting 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. The accompanying report reveals distinguishing confidential, preliminary, and pre-decisional aspects of NuScale's commercial strategy. The precise financial value (loss) resulting from public disclosure of the information is difficult to quantify, but it is sensitive information related to NuScale's commercial strategy and, therefore, has substantial value to NuScale.
- (4) The information sought to be withheld is in the enclosed report entitled NuScale NPM-20 250 MWt Standard Design Approval Application Status Report. 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 8/15/2022.



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Carrie Fosaaen