January 23, 2020 Project No. 9990278

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

SUBJECT: NuScale Power, LLC Submittal "NuScale SMR Standard Design Approval Regulatory Engagement Plan," PL-0002-66070, Revision 1

REFERENCE: Letter from NuScale Power, LLC to U.S. Nuclear Regulatory Commission, "NuScale Power, LLC Submittal of 'NuScale SMR Standard Design Approval Regulatory Engagement Plan,' PL-0002-66070, Revision 0," dated October 7, 2019 (ML19283B501)

Enclosed for your review is the NuScale Small Modular Reactor (SMR) Standard Design Approval (SDA) Regulatory Engagement Plan, PL-0002-66070, Revision 1. This plan is intended to guide interactions between NuScale and the NRC for the planned submittal of a Standard Design Approval application for the NuScale small modular reactor design. This is being submitted to you to support the January 30, 2020 public meeting to discuss comments on the plan.

Enclosure 1 is the proprietary version of "NuScale SMR Standard Design Approval Regulatory Engagement Plan." 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 SMR Standard Design Approval Regulatory Engagement Plan."

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

If you have any questions, please contact Mike Melton, Licensing Manager, at (240) 833-3007 or at mmelton@nuscalepower.com.

Sincerely,

Zackary Rad,
Regulatory Affairs Director
NuScale Power, LLC

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Enclosure 1: “NuScale SMR Standard Design Approval Regulatory Engagement Plan,” PL-0002-66070, Revision 1, proprietary
Enclosure 2: “NuScale SMR Standard Design Approval Regulatory Engagement Plan,” PL-0002-66070, Revision 1, nonproprietary
Enclosure 3: Affidavit of Zackary W. Rad, AF-0120-68537

Enclosure 1:

"NuScale SMR Standard Design Approval Regulatory Engagement Plan," PL-0002-66070, Revision 1, proprietary

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Enclosure 2:

"NuScale SMR Standard Design Approval Regulatory Engagement Plan," PL-0002-66070, Revision 1, nonproprietary

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NuScale SMR Standard Design Approval Regulatory Engagement Plan

January 2020

Revision 1

NuScale Power, LLC

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CONTENTS

1.0 Introduction/Purpose

The purpose of this plan is to guide interactions between NuScale and the NRC for the planned submittal of a standard design approval (SDA) application for the NuScale small modular reactor (SMR) design. This plan identifies the planned regulatory approach and defines interactions and roles and responsibilities in order to enhance communication and reduce regulatory uncertainty. This plan is expected to be a living document and can be updated as plans evolve. The structure of this plan is based on Guidelines for Development of a Regulatory Engagement Plan, NEI 18-06 (Reference 7.1).

1.1 Contact Information

The point of contact for written correspondence with NuScale is the director, Regulatory Affairs, at the following address:

Zackary W. Rad
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Lead point of contact relating to the SDA and coordination of routine interactions is:

Mike Melton
Manager, Licensing
NuScale Power, LLC
11333 Woodglen Dr. Suite 205
Rockville, MD 20852

Phone: (240) 833-3007
mmelton@nuscalepower.com

1.2 Summary of Strategic Project Approach/Goals

NuScale is using the SDA licensing process in accordance with 10 CFR 52, Subpart E (Reference 7.8) to obtain NRC approval for the design that incorporates changes beyond those included in the last revision of the final safety analysis report (FSAR) referenced in the rulemaking for the NuScale SMR Design Certification Application (DCA). {{ }}[2(c),(d)] NuScale plans to submit the final design in the form of an FSAR for the entire facility per 10 CFR 52.135 (Reference 7.9), including the associated changes to referenced topical and technical reports. Other parts of the application will also be included as discussed in Section 3.2. Consistent with 10 CFR 52.133 (Reference 7.10), the SDA may be referenced by construction permit or combined license (COL) applicants.

Much of the design for the SDA will be similar to the DCA design for the NuScale Standard Plant DCA. Therefore, NRC will have familiarity with the basic design. The focus of preapplication engagements is to gain alignment on the risk-informed content of the SDA application, and the scope and depth of NRC review. Preapplication engagements will also include a discussion of design changes with the purpose of gaining alignment on whether any significant technical and policy issues arise as a result of the changes in the design. NuScale desires that as much of this alignment be documented during the preapplication phase so that it can be referenced throughout the duration of the review as changes occur in both organizations.

1.3 Background

NuScale submitted a DCA in accordance with 10 CFR 52, Subpart B (Reference 7.11). This application is in the final stages of review and approval. Numerous meetings (more than 100 engagements over 5 years), both preapplication and during the post-submittal review, were conducted with NRC to resolve first-of-a-kind (FOAK) issues associated with the NuScale SMR design. In addition, numerous meetings with the Advisory Committee for Reactor Safeguards (ACRS) were also held to further discuss and challenge the NuScale SMR design as a part of the certification process.

This SDA application intends to take advantage of these prior interactions and issue resolutions. NuScale has identified some valuable design changes during the final design process for the DCA that would be most beneficial to its current and future COL clients.

1.4 Approach

The regulatory engagement plan (REP) is planned to be a living document with updates as required in order to document agreement between NuScale and the NRC staff regarding licensing approach, resolution of issues, schedule expectations, and interaction protocol. Prior to official updates to the plan, the NuScale SDA Licensing manager will contact the lead project manager (PM) for the NRC to communicate planned changes prior to transmittal. Internal NuScale licensing procedures will be consistent with the related information in this REP (e.g., the process for written submittals).

2.0 Technology Summary

The design of the NuScale SMR in this SDA application is similar to that described in the DCA, uprated to 200MWt, with other valuable changes identified during the final design process.

3.0 Regulatory Strategy

3.1 Application Type

NuScale is using the SDA licensing process described in 10 CFR 52, Subpart E to submit an SDA application in order to obtain NRC approval for the SMR design. According to 10 CFR 52.135, an application that is submitted to the NRC in support of an SDA may consist of either the final design for the entire facility or the final design of major portions thereof. NuScale's plan is to submit an SDA application for the entire facility that encompasses the complete design and includes all design changes from that described in the earlier DCA SMR design.

The submittal of the entire FSAR for the SDA application demonstrates that NuScale has performed a comprehensive review against the DCA-FSAR of record. Consistent with 10 CFR 52.133, the SDA may be referenced by construction permit or combined license (COL) applicants.

3.2 Application Content

The SDA application includes content requirements elaborated in the regulations in Subpart E to 10 CFR Part 52. The general information required for an SDA application, per 10 CFR 52.136 (Reference 7.12), is similar to that provided in Part 1 of the DCA, plus additional corporate information not required for the DCA: (a) name of applicant; (b) address of applicant; (c) description of business or occupation of applicant; and (d) the state where the applicant's company is incorporated or organized and the principal location where it does business; (e) the names, addresses, and citizenship of its directors and of its principal officers; and (f) whether it is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government.

Although the primary SDA application scope is an FSAR (per 10 CFR 52.137 [Reference 7.13]) and the associated changes to topical and technical reports that are incorporated by reference, the application will also include other parts. Additional information will be required by COL applicants in order to complete their application that references the NuScale SDA. A review of Regulatory Guide 1.206 (Reference 7.2) was performed in order to determine the various parts of the SDA application that will be needed. Table 3-1 lists the parts of the application required for a DCA, a COLA, and the following parts proposed for inclusion in the NuScale SDA application submittal:

- General and Financial Information
- Safety Analysis Report (comparable to Part 2 Tier 2 of the DCA)
- Proposed Technical Specifications
- Exemptions
- Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
- Withheld Information
- Quality Assurance Program Description

NuScale may choose to submit these parts either as a part of a broader SDA package or separately on the docket. Portions of the application that are proposed for inclusion but not required by regulation will be discussed with NRC during preapplication engagement.

3.3 Precedent

The NRC has recently granted an SDA in concert with approval for a DCD submitted for a certified design. KEPCO/KHNP submitted Rev. 3 of their Design Control Document (DCD) for the APR1400 on August 13, 2018 (ADAMS Accession No. ML18228A680) and concurrently requested approval of the APR1400 standard design pursuant to Subpart E of 10 CFR Part 52, in addition to the request for design certification under Subpart B of 10 CFR Part 52. On the basis of its final safety evaluation report for the DCA (ADAMS Accession No. ML18087A364), the NRC also issued a standard design approval (ML18261A187) on September 28, 2018. The design and application of the approved design certification and the SDA is identical, however.

Under prior regulations, design certification applicants were required and did receive "final design approval" (FDA) prior to requesting design certification, and some applicants sought and received final design approval independent of design certification. The current Standard Design Approval process has not been completed for an application separate from design certification. However, the earlier FDA precedent may be useful in informing discussions with NRC staff on this little-utilized process.

3.4 Application FSAR Content

The technical information required and the primary scope of the SDA application is an FSAR, which is based on Part 2 of the DCA (Tier 2 information), referred to as the DCA-FSAR. The DCA-FSAR will be revised to include changes that have been identified and approved for the SDA application. The requirements for SDA application are similar to and encompassed by the requirements used in the NRC staff review of the DCA-FSAR as part of the design certification under 10 CFR 52 Subpart B. The existing detail in the DCA-FSAR and the full scope SDA application satisfies the technical content requirements of 10 CFR 52.137.[1]

Several types of changes are being made to the information that was provided in the DCA-FSAR to address: (1) design changes related to a power increase and other valuable changes identified during the final design process for the DCA, (2) risk-informing the FSAR content by removing extraneous detail that does not support an NRC safety finding, (3) additional detail to resolve some COL items originally included in the DCA-FSAR, and (4) address any updated regulations and regulatory guidance since the submittal of the[1] DCA. Each of these topics is discussed in more detail below.

[1] The SDA FSAR includes one requirement that does not exist for a DCA FSAR: "Information pertaining to design features that affect plans for coping with emergencies in the operation of the reactor facility or a major portion thereof" (10 CFR 52.137(a)(11)). This information should be satisfied by the DCA FSAR, but may need to be specifically identified within the SDA FSAR.

3.4.1 Design Changes

The design of the NuScale SMR in this SDA application is similar to that described in the DCA with a 25% thermal power increase and other changes. A review of the significant design changes will be the subject of a separate preapplication meeting.

3.4.2 FSAR Content Optimization

These changes are intended to remove extraneous information in the FSAR that are not needed for NRC staff to make a safety finding. Risk insights and possible safety impacts are used to provide a streamlined FSAR. Information not referenced in the NRC's DCA SER are possible candidates for removal, in addition to the guidance for the required level of detail provided in the latest revision to Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition (SRP), NUREG-800, (Reference 7.3), Design-Specific Review Standard for NuScale SMR Design (Reference 7.4), and Regulatory Guide 1.206 (Reference 7.2). Also, the level of detail should be consistent with its significance to safety. {{

}}2(c),(d)

3.4.3 Additional Detail to Resolve Some COL items

Since the design detail has progressed since the DCA, some additional standard design details that were defined in the DCA as COL responsibility as COL items will be included instead in the SDA application in part or in whole. The corresponding COL items will be deleted in the SDA if the corresponding information has been incorporated into the SDA or revised if fulfilled in part. These changes will be communicated to the planned COL applicants so that the follow-on COL applications reflect these COL item updates. No updates are planned for COL items that require site-specific information.

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}}2(c),(d)

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}}2(c),(d)

3.4.4 Updated Regulations and Regulatory Guidance

Since the NuScale DCA was submitted in December 2016, there may be changes in the regulations and regulatory guidance documents that must be addressed by the SDA application. The DCA reflects regulations in effect and applicable as of the completion of design certification, and the regulatory guidance in effect six months before the date of application docketing (March 20, 2017). These changes must be reflected in the SDA application and listed in Section 1.9 of the FSAR, *Conformance with Regulatory Criteria.*

Example – SRP Revisions to a number of sections, e.g., SRP Section 3.9.4

Updates to SRP sections have occurred, with the conformance to the SRP and the Design-Specific Review Standard (DSRS) documented in Table 1.9-3 of Tier 2 of the DCA FSAR. An example of one of the updates is that SRP Section 3.9.4 – Control Rod Drive Systems – was updated to Rev. 4 in March 2017 (after DCA submittal) whereas the DCA references conformance with acceptance criteria in Rev. 3 (March 2007).

3.5 SDA Application Submittal Markup

To assist NRC reviewers, it would be helpful for them to know what information in the SDA application is unchanged from the DCA, and a risk-informed indication as to whether NuScale believes the changes might have possible safety or risk significance {{ }}2(c),(d). NuScale proposed to provide in the application color-coded text/font directly to indicate changes from the DCA and whether

it is believed the changes might have possible safety or risk significance (e.g., tan/brown for no impact, and blue for those with potential safety or risk significance). Text that is unchanged from the DCA would be indicated in normal black font. This version of the SDA application would be sent formally to the NRC Document Control Desk to be placed on the licensing docket. After all issues have been resolved, NuScale plans to send to the NRC a final black/white version for placement on the docket in support of the NRC staff's FSER issuance. As has been the practice for DCA revisions, an informal courtesy copy can be placed in the Electronic Reading Room (ERR) for information and to show deletions (strikeouts).

Once completed, SDA application FSAR section content (with designated changes from the DCA FSAR) may be made available to NRC for early review/audit via the ERR, when practical.

Table 3-1. SDA application format and content

APPLICATION PART	COMBINED LICENSE	DESIGN CERTIFICATION	SDAA – Required by Regulation	SDAA – Needed to Support COL	Include as Part of SDAA Submittal	Changed from NuScale DCA
Transmittal Letter	✓*	✓	✓	N/A	Yes	Yes
Part 1: General and Financial Information	✓	✓ (financial info. not required)	✓ (financial info. not required)	N/A	Yes	Yes (minimal)
Part 2: Safety Analysis Report – Tier 1	N/A	✓	No	No	No	Yes
• Ch 1 - Introduction	N/A	✓	No	No	No	N/A
• Ch 2 - Unit Specific SSCs Design Descriptions and ITAAC	N/A	✓	No	ITAAC Only	ITAAC Only (see Part 08)	No
• Ch 3 - Shared SSCs and Non-SSCs Design Descriptions and ITAAC	N/A	✓	No	ITAAC Only	ITAAC Only (see Part 08)	No – To Be Verified (TBV)
• Ch 4 - Interface Requirements	N/A	✓	No	No	No	N/A
• Ch 5 - Site Parameters	N/A	✓	No	No	No (in FSAR Ch 2)	N/A
Part 2: Safety Analysis Report – Tier 2	✓	✓	✓	Yes	Yes	Yes
Part 3: Environmental Report	✓	✓	No	No	No	N/A
Part 4: Technical Specifications	✓	✓	No	Yes	Yes (could also be included in FSAR Ch 16)	Yes

Template #: CP-0503-1952-F05-R4

APPLICATION PART	COMBINED LICENSE	DESIGN CERTIFICATION	SDAA – Required by Regulation	SDAA – Needed to Support COL	Include as Part of SDAA Submittal	Changed from NuScale DCA
Part 5: Emergency Plans	✓	Optional (Limited Scope) Not in NuScale DCA	No	No	No	N/A
Part 6: Security Plans	✓	Optional (Limited Scope) Not in NuScale DCA	No	No	No	N/A
Part 7: Exemptions, Departures, and Variances	Yes, if Applicable	Yes, if Applicable	Yes, if Applicable	N/A	Yes - Exemptions	No (TBV)
Part 8: License Conditions; Inspections, Tests, Analyses and Acceptance Criteria	✓	✓ (ITAAC only) NuScale DCA references Part 2 Tier 1	No	Yes (only ITAAC)	Yes (only ITAAC) Could include as a separate IBR rpt	No (TBV)
Part 9: Withheld Information	✓	✓ NuScale DCA provides list of tables and figures	✓	N/A	Yes	Yes
Part 10: Quality Assurance Program Description	✓	✓ NuScale DCA references separate topical report	✓	Yes	Yes	Yes (minimal)
Part 11: Supplemental Information (e.g., Limited Work Authorization)	Yes, if Applicable	Yes, if applicable None for NuScale DCA	No	No	No	N/A

* The symbol "✓" denotes mandatory information.

4.0 Preapplication Engagement

NuScale will conduct preapplication meetings (teleconferences, videoconferences, and face-to-face) with the NRC to assess and mitigate the regulatory risks associated with the SDA application prior to the SDA project ramp-up. The primary benefit planned for this engagement is alignment on the risk-informed content of the application, and scope and depth of the NRC review. Design changes to be included in the SDA application will also be discussed to identify and align on any new significant technical or policy issues. The SDA preapplication process will leverage the experience and lessons learned from the preapplication and safety review of the DCA. There is no intent to revisit topics previously discussed and resolved during the DCA review process. Some key items for discussion are included below.

- explain and gain general agreement on the proposed SDA application licensing strategy and method of indicating changes from the DCA
- explain and gain general agreement on the scope of the SDA application parts, including topical and technical reports
- provide an overview of the design changes
- gain agreement on the portions of the SDA application that NuScale seeks to include that are not required by regulation, to ensure that NRC will review and grant finality on those portions
- gain agreement on the content of Part 7, Exemptions, Departures, and Variances, with respect to several regulations that the design certification will address (10 CFR 50.54(m) and 10 CFR 50 Appendix J), and whether those same regulations can be addressed by the SDA
- gain agreement on a preliminary schedule for SDA application review and approval
- discuss NuScale and NRC expectations for SDA application FSAR level of detail, including NuScale's planned methodology for removal of extraneous information
- discuss and document protocol/process and implementation of a risk-informed (safety-focused) review
- potential NRC preapplication audit of the SDA application prior to the planned submittal date (similar to that done for the DCA)

Agreements reached during the preapplication meetings regarding the review process (nontechnical topics) will be captured in writing by the NRC to guide their review. For example, it is expected that certain tests conducted to support the DCA will not be necessary to be repeated to support the SDA application. Documenting the resolution of application and review topics is key to ensuring consistency during the review process.

4.1 Types and Frequency of Interactions

The type and frequency of interactions between the NRC and NuScale will vary depending on the needs of both parties, and the availability of NRC and NuScale resources.

4.1.1 Routine Project Management Discussions

Prior to and following submittal of the SDA application, routine and frequent interaction is expected via phone and email between the assigned NRC project manager (PM) and the NuScale SDA Licensing manager. This interaction is important for a consistent understanding of the status of issues and to coordinate planned teleconferences, and meetings.

4.1.2 Project Management "Drop-Ins"

"Drop-in" visits – periodic, nonpublic meetings between NuScale and NRC project management (which may include participation by various levels of NuScale and NRC management) will typically be conducted periodically to exchange general information on nontechnical topics such as planning for future interactions, and status/schedule updates. Limited discussion of technical issues can occur, but typically it will be in the context of status of review or identification of topics for separate discussion.

4.1.3 Application Strategy and Technical Discussions

Initial discussions between NuScale and the NRC staff will be concerned primarily with the planned strategies for development and submittal of the application, including the different parts of the application. The objective of technical discussions will be to focus on the differences in design between this SDA application and the DCA. Topics for these discussions, as well as follow-up interactions, will be developed by the NuScale SDA Licensing manager in consultation with the NRC PM. Discussions may focus on individual topics or several topics combined (for efficiency).

4.1.4 Written Submittals

Other than the SDA application submittal itself (See Section 5.2), a number of other written submittals will be provided on the docket, including white papers, presentations, and topical and technical reports impacted by the SDA design changes. The topical and technical reports were incorporated by reference (IBR) within the reference DCA. These reports will be updated, if necessary, and submitted either prior to the SDA application transmittal or concurrently. Topical reports are standalone documents with associated safety evaluation reports (SERs). Topical reports typically address a technical issue, methodology, or process submitted for review and approval. When approved, they may be referenced by NuScale and other license applicants. Since topical report revisions supersede prior versions, separate submittal of these topical reports containing non-editorial changes may be required on the SDA application docket. Technical reports are similar and provide support for and clarification of information in an application, but do not receive a separate SER. One area for alignment during preapplication is the extent to which topical and technical reports will be incorporated by reference versus summarized in the FSAR.

5.0 Application Process

5.1 Readiness Assessment Audit

Since numerous audits and inspections were conducted for the DCA, additional preapplication audits are considered to be unnecessary for the SDA application. However, NuScale may request optionally that the NRC staff conduct a readiness assessment audit of the completed (or near-complete draft) SDA application (as done for the DCA). This is a comprehensive review of the draft application over several days. The conclusion of the audit is a series of observations by the NRC staff, focusing on issues that might preclude acceptance of the application for review if left unresolved or uncorrected. In addition, a secondary objective of the readiness assessment is to identify areas of the SDA application for which clarifications or supplemental information could preclude or minimize major staff requests for additional information. Guidance for NRC conduct of the readiness assessment is given in NRC Office Instruction, NRO-REG-104 (Reference 7.5). The readiness audit should occur with sufficient time to resolve any identified issues prior to the submittal of the application.

5.2 Application Submittal

The SDA application will be submitted in advance of any construction permit or COLA referencing the SDA.

6.0 Other Topics

6.1 Schedule

Preapplication

- Initial SDA Application Discussion with NRC Mgmt. – 03/11/2019 (Actual)
- Project Request Letter – 04/30/2019 (Actual)
- Initial SDA Preapplication Public Meeting with NRC – 09/25/2019 (Actual)
- Future preapplication meetings scheduled every 2–3 months with suggested future topics as follows:
  - Risk-Informed Review Process
    - Purpose: Discuss proposed process to be used for review of the SDA application to utilize risk-informed concepts based on the changes to the DC application and to streamline the review.
  - Optimization of FSAR Content
    - Purpose: Discuss process for removal of extraneous information in the FSAR not needed to support a safety finding and to utilize risk insights, where appropriate.
  - Administrative and Process Requirements/Expectations for Review Implementation

- ♦ Purpose: Discuss administrative process requirements for the review process (e.g., requirements for treatment of support information (including material incorporated by reference), improved rigor in conduct of audits, and process for achieving alignment on review topics).

– Scope/Budget Management

- ♦ Purpose: Discuss process to be used to manage the scope and budget, oversee staff charges, and track actual review cost performance versus projections.

– Description of Design changes (power increase [NPM-200] , value engineering items)

- ♦ Purpose: Familiarize NRC staff with the major changes in design, and methodology from the DCA and impacts to safety evaluation. This will also allow NRC to allocate review resources based on the degree of changes.

– Updates to Topical and Technical Reports

- ♦ Purpose: Identify SDA application impacts to topical and DCA technical reports, with updates provided via a new submittal or a supplement, and schedule for these submittals.

- Pre-application Audits and Inspections (as needed)
- Readiness Assessment Audit (optional) – TBD

Application

- Submittal of SDA Application – 4th Quarter 2021
- Final Safety Evaluation Report – 1st Quarter 2024 (reflecting a 24-month review duration)
- Proposed 4 phase review

6.2 Budget

Budgeting considerations can be an important consideration in establishing and maintaining the SDA application project schedule. Estimated NRC staff review fees, including review hours will be estimated at the time of acceptance for review and monitored on an ongoing basis. Both NRC and NuScale will communicate with each other any expected changes in the level of estimated NRC staff review fees or any funding restrictions.

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}}2(c),(d)

6.3 Periodic Summary Reports

Summary reports that describe accomplishments, progress, and remaining outstanding items will be produced {{ }}[2(c),(d)] to assess the status and current progress. Ideally, the content will be agreed to by both NRC and NuScale.

7.0 References

7.1 Nuclear Energy Institute, “Guidelines for Development of a Regulatory Engagement Plan,” NEI 18-06, Rev. 0, June 2018.

7.2 U.S. Nuclear Regulatory Commission, “Applications for Nuclear Power Plants,” Regulatory Guide 1.206, Rev. 1, October 2018.

7.3 U.S. Nuclear Regulatory Commission, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition (SRP),” NUREG-0800.

7.4 U.S. Nuclear Regulatory Commission, “Design-Specific Review Standard for NuScale Small Modular Reactor Design,” Rev. 0, June 2016, Agencywide Documents Access and Management System (ADAMS) Accession No. ML15355A295.

7.5 U.S. Nuclear Regulatory Commission (Office of New Reactors), “Pre-application Readiness Assessment,” NRO-REG-104, Rev. 0, October 8, 2014, ADAMS Accession No. ML14079A197.

7.6 U.S. Nuclear Regulatory Commission (Office of New Reactors), “Acceptance Review Process for Early Site Permit, Design Certification, and Combined License Applications,” NRO-REG-100, Rev. 2, December 18, 2014, Agencywide Document Access and Management System (ADAMS) Accession No. ML14078A152.

7.7 U.S. Nuclear Regulatory Commission (Office of New Reactors), “Development, Review and Approval Process for Requests for Additional Information,” NRO-REG-101, Rev. 2, August 15, 2018, Agencywide Document Access and Management System (ADAMS) Accession No. ML18199A238.

7.8 *U.S. Code of Federal Regulations*, “Licenses, Certifications, and Approvals for Nuclear Power Plants,” Subpart E, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52 Subpart E).

7.9 *U.S. Code of Federal Regulations*, “Filing of Applications,” Section 52.135, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52.135).

7.10 *U.S. Code of Federal Regulations*, “Relationship to Other Subparts,” Section 52.133, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52.133).

7.11 *U.S. Code of Federal Regulations*, “Standard Design Certifications,” Subpart B, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52 Subpart B).

7.12 *U.S. Code of Federal Regulations*, “Contents of Applications; General Information,” Section 52.136, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52.136).

7.13 *U.S. Code of Federal Regulations*, “Contents of Applications; Technical Information,” Section 52.137, Part 52, Chapter I, Title 10, “Energy,” (10 CFR 52.137).

Enclosure 3:

Affidavit of Zackary W. RAD. AF-0120-68537

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NuScale Power, LLC

AFFIDAVIT of Zackary W. Rad

I, Zackary W. Rad, state as follows:

(1) I am the Director of 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 submittal reveals distinguishing confidential, preliminary and/or 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 submittal entitled "NuScale SMR Standard Design Approval Regulatory Engagement Plan." The enclosure contains the designation "Proprietary" at the bottom 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 January 23, 2020.

Zackary W. Rad