

NuScaleDCRaisPEm Resource

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Sent: Friday, May 26, 2017 3:12 PM
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Cc: NuScaleDCRaisPEm Resource; Lee, Samuel; Chowdhury, Prosanta; Rivera-Varona, Aida; Demarshall, Joseph
Subject: Request for Additional Information No. 29, RAI 8827
Attachments: Request for Additional Information No. 29 (eRAI No. 8827).pdf

Attached please find NRC staff's request for additional information concerning review of the NuScale Design Certification Application.

Please submit your 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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Request for Additional Information No. 29 (eRAI No. 8827)

Issue Date: 05/26/2017

Application Title: NuScale Standard Design Certification - 52-048

Operating Company: NuScale Power, LLC

Docket No. 52-048

Review Section: 13.05.02.01 - Operating and Emergency Operating Procedures

Application Section: 13.5

QUESTIONS

13.05.02.01-2

Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures"

REQUIREMENTS

10 CFR 52.79(a)(29)(i) and (ii) require the FSAR to include plans for the conduct of normal operations, and plans for coping with emergencies (other than the emergency plans required by 10 CFR 50.47 and 10 CFR Part 50, Appendix E). These requirements include plans for the development and implementation of plant procedures, which in part address the administrative control requirements of 10 CFR 52.79(a)(27) and compliance with 10 CFR Part 50, Appendix B. The review of plant procedure information in the Design Certification Application (DCA) Part 2, Final Safety Analysis Report (FSAR) (Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures") is performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (SRP) Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures," and is required by 10 CFR 52.47(a)(9).

ISSUE

Relevant sections of the SRP direct the staff to review the COL applicant's plans for the development and implementation of plant procedures.

Staff review of FSAR Sections 13.5.1, "Administrative Procedures," and 13.5.2, "Operating and Maintenance Procedures," revealed the following:

- A COL information item has not been provided for the COL applicant to provide a plan for the development and implementation of Administrative Procedures.
- A COL information item has not been provided for the COL applicant to provide a plan for the development and implementation of Operating Procedures.
- A COL information item has not been provided for the COL applicant to provide a plan for the development and implementation of Emergency Operating Procedures (EOPs), including submittal of the Procedures Generation Package (PGP). The PGP consists of the following:
 1. Plant-specific technical guidelines (P-STGs),
 2. A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing plant-specific EOPs based on the P-STGs,
 3. A description of the program for verification and validation (V&V) of the EOPs,
 4. A description of the program for training operators on the EOPs.

INFORMATION NEEDED

The applicant is requested to provide a dedicated COL information item in Section 13.5.1 of the FSAR, for the COL applicant to provide a plan for the development and implementation of Administrative Procedures, including preliminary schedules for preparation and target dates for completion.

The applicant is requested to provide a dedicated COL information item in Section 13.5.2.1 of the FSAR, for the COL applicant to provide a plan for the development and implementation of Operating Procedures, including preliminary schedules for preparation and target dates for completion.

The applicant is requested to provide a dedicated COL information item in Section 13.5.2.1 of the FSAR, for the COL applicant to provide a plan for the development and implementation of EOPs, including submittal of the PGP, along with preliminary schedules for preparation and target dates for completion.

13.05.02.01-3

Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures"

REQUIREMENTS

10 CFR 52.79(a)(29)(i) and (ii) require the FSAR to include plans for the conduct of normal operations, and plans for coping with emergencies (other than the emergency plans required by 10 CFR 50.47 and 10 CFR Part 50, Appendix E). These requirements include plans for the development and implementation of plant procedures, which in part address the administrative control requirements of 10 CFR 52.79(a)(27) and compliance with 10 CFR 50, Appendix B. The review of plant procedure information in the Design Certification Application (DCA) Part 2, Final Safety Analysis Report (FSAR) (Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures") is performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (SRP) Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures," and is required by 10 CFR 52.47(a)(9).

ISSUE

SRP Section 13.5.2.1, "Operating and Emergency Operating Procedures," Subsection I.1, states:

"The SAR or other submittal should describe the different classifications of procedures the operators will use in the control room and locally in the plant for plant operations. The group within the operating organization responsible for maintaining the procedures should be identified and the general format and content of the different classifications should be described."

COL information item 13.5-2 under FSAR Section 13.5.2.1, "Operating and Emergency Operating Procedures," states:

"A COL applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that licensed operators perform in the control room, including normal operating procedures, abnormal operating procedures, and emergency operating procedures (EOPs), and describe the classification system for these types of procedures and general format and content for each classification."

Contrary to what is specified in COL information item 13.5-2, site-specific procedures used by operators are not limited solely to those utilized by licensed operators in the control room, but also include procedures that operators (licensed and non-licensed) will use locally in the plant as well. In addition,

COL information item 13.5-2 does not specify the need to identify the group within the operating organization responsible for maintaining the procedures.

INFORMATION NEEDED

The applicant is requested to provide the changes necessary to ensure that COL information item 13.5-2 requires the COL applicant to: (1) describe the different classifications of procedures the operators will use both in the control room and locally in the plant, and (2) identify the group within the operating organization responsible for maintaining these procedures.

13.05.02.01-4

Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures"

REQUIREMENTS

10 CFR 52.79(a)(29)(i) requires the FSAR to include plans for the conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components. This requirement includes plans for the development and implementation of plant procedures, which in part address the administrative control requirements of 10 CFR 52.79(a)(27) and compliance with 10 CFR Part 50, Appendix B. The review of plant procedure information in the Design Certification Application (DCA) Part 2, Final Safety Analysis Report (FSAR) (Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures") is performed in accordance with NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (SRP) Chapter 13, "Conduct of Operations," Section 13.5, "Plant Procedures," and is required by 10 CFR 52.47(a)(9).

ISSUE

Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements (Operation)," Revision 3, endorses ANSI/ANS 3.2-2012, "Managerial, Administrative, and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants," which should be used as guidance to assure minimal procedural coverage for plant operating activities (includes "other" operating activities, i.e., activities not procedurally covered by the operating or emergency operating procedures identified in Subsection I.1 of SRP 13.5.2.1), and related maintenance activities. ANSI/ANS 3.2-2012, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," lists typical safety-related activities that should be covered by written procedures.

COL information item 13.5-3 under FSAR Section 13.5.2.2, "Maintenance and Other Operating Procedures," states:

"A COL applicant that references the NuScale Power Plant design certification will describe the site-specific program for developing maintenance and other operating procedures, including the classification system, objectives, and organizational responsibility for the following types of procedures:"

- plant radiation protection procedures
- emergency preparedness procedures
- instrument calibration and test procedures
- chemical-radiochemical control procedures
- radioactive waste management procedures
- maintenance and modification procedures

- material control procedures
- plant security procedures

Use of the qualifier “instrument” in the bulleted description “instrument calibration and test procedures” is limiting in the sense that a COL applicant could potentially interpret the qualifier to mean only those procedures that pertain to the calibration of Measuring and Test Equipment (M&TE) and/or the periodic calibration and testing of plant instrumentation and control systems. Testing procedures include implementing procedures required for surveillance tests (instrumentation and non-instrumentation alike) and inspections listed in the technical specifications, examples of which are provided in ANSI/ANS 3.2-2012, Appendix A.

Relevant sections of the SRP against which the review of FSAR Section 13.5, “Plant Procedures,” is conducted, state that the COL applicant’s safety analysis report (SAR) should describe Plant Procedures that will be used by the operating organization (plant staff). While COL information item 13.5-3 does require the COL applicant to describe the classification system, objectives, and organizational responsibility for maintenance and other operating procedures (i.e., procedures for activities not procedurally covered by the operating or emergency operating procedures identified in Subsection I.1 of SRP 13.5.2.1), it does not specifically require the COL applicant to describe these types of procedures. Instead, COL information item 13.5-3 states that a COL applicant will describe the site-specific program for developing maintenance and other operating procedures. The COL applicant’s plan (program) for the development and implementation of procedures for maintenance and other operating activities, should be separate from and in addition to the COL applicant descriptions of these procedures to be provided in Section 13.5.2.2 of the FSAR, and should be the subject of a dedicated COL information item. Relevant sections of SRP against which the review of FSAR Section 13.5, “Plant Procedures,” is conducted, direct the staff to review the COL applicant’s plans for the development and implementation of plant procedures. A COL information item has not been provided for the COL applicant to provide a plan for the development and implementation of procedures for maintenance and other operating activities.

INFORMATION NEEDED

The applicant is requested to: (1) clarify use of the qualifier “Instrument” in the description “Instrument calibration and test procedures,” and (2) provide any changes necessary to ensure that the bulleted list in COL information item 13.5-3 sufficiently addresses the procedural coverage requirements included in ANSI/ANS 3.2-2012 for maintenance and other operating activities applicable to the NuScale plant design.

The applicant is requested to revise COL information 13.5-3 as necessary to address the need for COL applicants to provide the descriptions of maintenance and other operating procedures (i.e., procedures for activities not covered by the operating or emergency operating procedures identified in Subsection I.1 of SRP 13.5.2.1) in their FSAR.

The applicant is requested to provide a dedicated COL information item in Section 13.5.2.2 of the DCD, for the COL applicant to provide a plan for the development and implementation of procedures for maintenance and other operating activities, including preliminary schedules for preparation and target dates for completion.