

June 16, 2017

Docket No. 52-048

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

**SUBJECT:** NuScale Power, LLC Response to NRC Request for Additional Information No. 29 (eRAI No. 8827) on the NuScale Design Certification Application

**REFERENCE:** U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 29 (eRAI No. 8827)," dated May 26, 2017

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

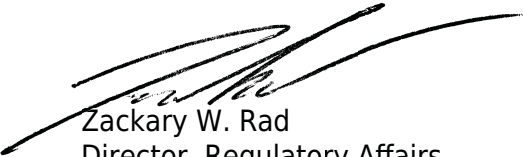
The Enclosure to this letter contains NuScale's response to the following RAI Questions from NRC eRAI No. 8827:

- 13.05.02.01-2
- 13.05.02.01-3
- 13.05.02.01-4

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

If you have any questions on this response, please contact Steven Mirsky at 240-833-3001 or at [smirsky@nuscalepower.com](mailto:smirsky@nuscalepower.com).

Sincerely,



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



RAIO-0617-54501

Distribution: Gregory Cranston, NRC, TWFN-6E55  
Samuel Lee, NRC, TWFN-6C20

Enclosure 1: NuScale Response to NRC Request for Additional Information eRAI No. 8827



RAIO-0617-54501

**Enclosure 1:**

NuScale Response to NRC Request for Additional Information eRAI No. 8827

---

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

**eRAI No.:** 8827

**Date of RAI Issue:** 05/26/2017

---

**NRC Question No.:** 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.

---

### **NuScale Response:**

In response to the first bullet of this RAI on administrative procedures, COL item 13.5-4 has been added to FSAR Section 13.5.1.

In response to the second bullet of this RAI on operating procedures, COL item 13.5-5 has been added to FSAR Section 13.5.2.1.

In response to the third and final bullet of this RAI on EOPs and the associated PGP, COL item 13.5-7 was added to FSAR Section 13.5.2.1.

The associated changes to FSAR Sections 13.5.1 and 13.5.2.1, and conforming changes to FSAR Table 1.8-2, *Combined License Information Items*, are attached. The changes specific to FSAR Section 13.5.2.1 supersede the FSAR Section 13.5.2.1 changes contained in NuScale's response to RAI 13.05.02.01-1.



**Impact on DCA:**

FSAR Section 13.5 and FSAR Table 1.8-2 have been revised as described in the response above and as shown in the markups provided in this response.

**Additional Information/Other Related Changes:**

The changes specific to FSAR Section 13.5.2.1 supersede the changes identified in this FSAR section that were contained in NuScale's response to RAI 13.05.02.01-1.

RAI 13.01.01-1, RAI 13.02.02-1, RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

**Table 1.8-2: Combined License Information Items**

<b>Item No.</b>	<b>Description of COL Information Item</b>	<b>Section</b>
COL Item 1.1-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the site-specific plant location.	1.1
COL Item 1.1-2:	A COL Applicant that references the NuScale Power Plant design certification will provide the schedules for completion of construction and commercial operation of each power module.	1.1
COL Item 1.4-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the prime agents or contractors for the construction and operation of the nuclear power plant.	1.4
COL Item 1.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide site-specific diagrams and legends, as applicable.	1.7
COL Item 1.7-2:	A COL Applicant that references the NuScale Power Plant design certification will list additional site-specific P&IDs and legends as applicable.	1.7
COL Item 1.8-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a list of departures from the certified design.	1.8
COL Item 1.9-1:	A COL Applicant that references the NuScale Power Plant design certification will review and address the conformance with regulatory criteria in effect six months before the docket date of the COL application for the site-specific portions and operational aspects of the facility design.	1.9
COL Item 1.10-1:	A COL Applicant that references the NuScale Power Plant design certification will evaluate the potential hazards resulting from construction activities of the new NuScale facility to the safety-related and risk significant structures, systems, and components of existing operating unit(s) and newly constructed operating unit(s) at the co-located site per 10 CFR 52.79(a)(31). The evaluation will include identification of any management and administrative controls necessary to eliminate or mitigate the consequences of potential hazards and demonstration that the limiting conditions for operation of an operating unit would not be exceeded. This COL item is not applicable for construction activities (build-out of the facility) at an individual NuScale Power Plant with operating NuScale Power Modules.	1.10
COL Item 2.0-1:	A COL Applicant that references the NuScale Power Plant design certification will demonstrate that site-specific characteristics are bounded by the design parameters specified in Table 2.0-1. If site-specific values are not bounded by the values in Table 2.0-1, the COL applicant will demonstrate the acceptability of the site-specific values in the appropriate sections of its combined license application.	2.0
COL Item 2.1-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site geographic and demographic characteristics.	2.1
COL Item 2.2-1:	A COL Applicant that references the NuScale Power Plant design certification will describe nearby industrial, transportation, and military facilities. The COL applicant will demonstrate that the design is acceptable for each potential accident, or provide site-specific design alternatives.	2.2
COL Item 2.3-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific meteorological characteristics for Section 2.3.1 through Section 2.3.5, as applicable.	2.3
COL Item 2.4-1:	A COL Applicant that references the NuScale Power Plant design certification will investigate and describe the site-specific hydrologic characteristics for Section 2.4.1 through Section 2.4.14, as applicable.	2.4
COL Item 2.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific geology, seismology, and geotechnical characteristics for Section 2.5.1 through Section 2.5.5, below.	2.5
COL Item 3.2-1:	A COL Applicant that references the NuScale Power Plant design certification will update Table 3.2-1 to identify the classification of site-specific SSC.	3.2
COL Item 3.3-1:	A COL Applicant that references the NuScale Power Plant design will confirm that nearby structures exposed to severe and extreme (tornado and hurricane) wind loads will not collapse and adversely affect the RXB or Seismic Category I portion of the CRB.	3.3
COL Item 3.4-1:	A COL Applicant that references the NuScale Power plant design certification will confirm the final location of structures, systems, and components subject to flood protection and final routing of piping.	3.4

**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.3-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of a near-site emergency operations facility for management of overall licensee emergency response and which complies with the guidance in NUREG-0696, "Functional Criteria for Emergency Response Facilities."	13.3
COL Item 13.3-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a comprehensive emergency plan in accordance with 10 CFR 50.47, 10 CFR 50, Appendix E, 10 CFR 52.48, and 10 CFR 52.79(a)(21).	13.3
COL Item 13.4-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide site-specific information, including implementation schedule, for operational programs:</p> <ul style="list-style-type: none"> <li>• Inservice inspection programs (refer to Section 5.2 and Section 6.6)</li> <li>• Inservice testing programs (refer to Section 3.9 and Section 5.2)</li> <li>• Environmental qualification program (refer to Section 3.11)</li> <li>• Pre-service inspection program (refer to Section 5.2)</li> <li>• Reactor vessel material surveillance program (refer to Section 5.3)</li> <li>• Pre-service testing program (refer to Section 3.9.6, Section 5.2, and Section 6.6)</li> <li>• Containment leakage rate testing program (refer to Section 6.2)</li> <li>• Fire protection program (refer to Section 9.5)</li> <li>• Process and effluent monitoring and sampling program (refer to Section 11.5)</li> <li>• Radiation protection program (refer to Section 12.5)</li> <li>• Non-licensed plant staff training program (refer to Section 13.2)</li> <li>• Reactor operator training program (refer to Section 13.2)</li> <li>• Reactor operator requalification program (refer to Section 13.2)</li> <li>• Emergency planning (refer to Section 13.3)</li> <li>• Process control program (PCP) (refer to Section 11.4)</li> <li>• Security (refer to Section 13.6)</li> <li>• Quality assurance program (refer to Section 17.5)</li> <li>• Maintenance rule (refer to Section 17.6)</li> <li>• Motor-operated valve testing (refer to Section 3.9)</li> <li>• Initial test program (refer to Section 14.2)</li> </ul>	13.4
COL Item 13.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.	13.5
COL Item 13.5-2:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures <del>that licensed operators perform in the control room</del> including normal operating <del>procedures, and</del> abnormal operating procedures, <del>and emergency operating procedures (EOPs), and</del> describe the classification system, <del>for these types of procedures and</del> general format, and content for each classification.	13.5
COL Item 13.5-3:	<p>A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific <del>program for developing</del> maintenance and other operating procedures, <del>including describe</del> the classification system, <del>general format, and content objectives, and</del> <del>organizational responsibility</del> for <del>each of</del> the following types of procedures:</p> <ul style="list-style-type: none"> <li>• plant radiation protection procedures</li> <li>• emergency preparedness procedures</li> <li>• <del>instrument</del> calibration and test procedures</li> <li>• chemical-radiochemical control procedures</li> <li>• radioactive waste management procedures</li> <li>• maintenance and modification procedures</li> <li>• material control procedures</li> <li>• plant security procedures</li> </ul>	13.5



**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.5-4:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-5:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-6:	A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.	13.5
COL Item 13.5-7:	<p>A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:</p> <ul style="list-style-type: none"> <li>• Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.</li> <li>• A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.</li> <li>• A description of the program for verification and validation of the EOPs.</li> <li>• A description of the program for training operators on the EOPs.</li> </ul>	13.5
COL Item 13.5-8:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.6-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide the following:</p> <ul style="list-style-type: none"> <li>• Security Plans (Physical Security, Security Training and Qualification, and Safeguards Contingency Plans)</li> <li>• proposed site security provisions to be implemented during construction and as modules are completed and become operational of a new plant</li> <li>• portions of the physical security system not located within the nuclear island and structures</li> </ul>	13.6
COL Item 13.6-2:	A COL Applicant that references the NuScale Power Plant design certification will be responsible for the requirements described in Table 5-1 of TR-0416-48929, Rev 0 NuScale Design of Physical Security Systems.	13.6
COL Item 13.6-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a secondary alarm station that is equal and redundant to the central alarm station.	13.6
COL Item 13.6-4:	A COL Applicant that references the NuScale Power Plant design certification will provide Inspections, Tests, Analyses, and Acceptance Criteria for site specific physical security SSCs.	13.6
COL Item 13.6-5:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the Access Authorization Program.	13.6
COL Item 13.6-6:	A COL Applicant that references the NuScale Power Plant design certification will provide a Cyber Security Plan.	13.6
COL Item 13.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for plant operations.	13.7
COL Item 13.7-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for construction.	13.7

## 13.5 Plant Procedures

Administrative and operating procedures are utilized by the operating organization (plant staff) to ensure that routine operating, off-normal, and emergency activities are conducted in a safe manner.

### 13.5.1 Administrative Procedures

COL Item 13.5-1: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-4: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

### 13.5.2 Operating and Maintenance Procedures

#### 13.5.2.1 Operating and Emergency Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-2: 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,~~ and 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.

COL Item 13.5-5: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

COL Item 13.5-6: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.

COL Item 13.5-7: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:

- Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.
- A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.
- A description of the program for verification and validation of the EOPs.
- A description of the program for training operators on the EOPs.

### 13.5.2.2 Maintenance and Other Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-3: 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 describe~~ the classification system, general format, and content objectives, and organizational responsibility for each of 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

COL Item 13.5-8: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

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

**eRAI No.:** 8827

**Date of RAI Issue:** 05/30/2017

---

**NRC Question No.:** 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.

---

### **NuScale Response:**

In response to part (1) of this RAI, COL item 13.5-2 has been revised to describe the classifications of normal operating and abnormal operating procedures the operators will use both in the control room and locally in the plant. In new COL item 13.5-6, the classifications of emergency operating procedures that operators will use is described.

In response to part (2) of this RAI, new COL Items 13.5-4, 13.5-5, 13.5-7 and 13.5-8 state that "the COL applicant will identify the group within the operating organization responsible for maintaining these procedures."

The associated changes to FSAR Section 13.5.2.1 and conforming changes to FSAR Table 1.8-2, Combined License Information Items, are attached.



**Impact on DCA:**

FSAR Section 13.5.2.1 and FSAR Table 1.8-2 have been revised as described in the response above and as shown in the markups provided in this response.

RAI 13.01.01-1, RAI 13.02.02-1, RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

**Table 1.8-2: Combined License Information Items**

<b>Item No.</b>	<b>Description of COL Information Item</b>	<b>Section</b>
COL Item 1.1-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the site-specific plant location.	1.1
COL Item 1.1-2:	A COL Applicant that references the NuScale Power Plant design certification will provide the schedules for completion of construction and commercial operation of each power module.	1.1
COL Item 1.4-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the prime agents or contractors for the construction and operation of the nuclear power plant.	1.4
COL Item 1.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide site-specific diagrams and legends, as applicable.	1.7
COL Item 1.7-2:	A COL Applicant that references the NuScale Power Plant design certification will list additional site-specific P&IDs and legends as applicable.	1.7
COL Item 1.8-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a list of departures from the certified design.	1.8
COL Item 1.9-1:	A COL Applicant that references the NuScale Power Plant design certification will review and address the conformance with regulatory criteria in effect six months before the docket date of the COL application for the site-specific portions and operational aspects of the facility design.	1.9
COL Item 1.10-1:	A COL Applicant that references the NuScale Power Plant design certification will evaluate the potential hazards resulting from construction activities of the new NuScale facility to the safety-related and risk significant structures, systems, and components of existing operating unit(s) and newly constructed operating unit(s) at the co-located site per 10 CFR 52.79(a)(31). The evaluation will include identification of any management and administrative controls necessary to eliminate or mitigate the consequences of potential hazards and demonstration that the limiting conditions for operation of an operating unit would not be exceeded. This COL item is not applicable for construction activities (build-out of the facility) at an individual NuScale Power Plant with operating NuScale Power Modules.	1.10
COL Item 2.0-1:	A COL Applicant that references the NuScale Power Plant design certification will demonstrate that site-specific characteristics are bounded by the design parameters specified in Table 2.0-1. If site-specific values are not bounded by the values in Table 2.0-1, the COL applicant will demonstrate the acceptability of the site-specific values in the appropriate sections of its combined license application.	2.0
COL Item 2.1-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site geographic and demographic characteristics.	2.1
COL Item 2.2-1:	A COL Applicant that references the NuScale Power Plant design certification will describe nearby industrial, transportation, and military facilities. The COL applicant will demonstrate that the design is acceptable for each potential accident, or provide site-specific design alternatives.	2.2
COL Item 2.3-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific meteorological characteristics for Section 2.3.1 through Section 2.3.5, as applicable.	2.3
COL Item 2.4-1:	A COL Applicant that references the NuScale Power Plant design certification will investigate and describe the site-specific hydrologic characteristics for Section 2.4.1 through Section 2.4.14, as applicable.	2.4
COL Item 2.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific geology, seismology, and geotechnical characteristics for Section 2.5.1 through Section 2.5.5, below.	2.5
COL Item 3.2-1:	A COL Applicant that references the NuScale Power Plant design certification will update Table 3.2-1 to identify the classification of site-specific SSC.	3.2
COL Item 3.3-1:	A COL Applicant that references the NuScale Power Plant design will confirm that nearby structures exposed to severe and extreme (tornado and hurricane) wind loads will not collapse and adversely affect the RXB or Seismic Category I portion of the CRB.	3.3
COL Item 3.4-1:	A COL Applicant that references the NuScale Power plant design certification will confirm the final location of structures, systems, and components subject to flood protection and final routing of piping.	3.4

**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.3-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of a near-site emergency operations facility for management of overall licensee emergency response and which complies with the guidance in NUREG-0696, "Functional Criteria for Emergency Response Facilities."	13.3
COL Item 13.3-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a comprehensive emergency plan in accordance with 10 CFR 50.47, 10 CFR 50, Appendix E, 10 CFR 52.48, and 10 CFR 52.79(a)(21).	13.3
COL Item 13.4-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide site-specific information, including implementation schedule, for operational programs:</p> <ul style="list-style-type: none"> <li>• Inservice inspection programs (refer to Section 5.2 and Section 6.6)</li> <li>• Inservice testing programs (refer to Section 3.9 and Section 5.2)</li> <li>• Environmental qualification program (refer to Section 3.11)</li> <li>• Pre-service inspection program (refer to Section 5.2)</li> <li>• Reactor vessel material surveillance program (refer to Section 5.3)</li> <li>• Pre-service testing program (refer to Section 3.9.6, Section 5.2, and Section 6.6)</li> <li>• Containment leakage rate testing program (refer to Section 6.2)</li> <li>• Fire protection program (refer to Section 9.5)</li> <li>• Process and effluent monitoring and sampling program (refer to Section 11.5)</li> <li>• Radiation protection program (refer to Section 12.5)</li> <li>• Non-licensed plant staff training program (refer to Section 13.2)</li> <li>• Reactor operator training program (refer to Section 13.2)</li> <li>• Reactor operator requalification program (refer to Section 13.2)</li> <li>• Emergency planning (refer to Section 13.3)</li> <li>• Process control program (PCP) (refer to Section 11.4)</li> <li>• Security (refer to Section 13.6)</li> <li>• Quality assurance program (refer to Section 17.5)</li> <li>• Maintenance rule (refer to Section 17.6)</li> <li>• Motor-operated valve testing (refer to Section 3.9)</li> <li>• Initial test program (refer to Section 14.2)</li> </ul>	13.4
COL Item 13.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.	13.5
COL Item 13.5-2:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures <del>that licensed operators perform in the control room</del> including normal operating <del>procedures, and</del> abnormal operating procedures, <del>and emergency operating procedures (EOPs), and</del> describe the classification system, <del>for these types of procedures and</del> general format, and content for each classification.	13.5
COL Item 13.5-3:	<p>A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific <del>program for developing</del> maintenance and other operating procedures, <del>including describe</del> the classification system, <del>general format, and content objectives, and</del> <del>organizational responsibility</del> for <del>each of</del> the following types of procedures:</p> <ul style="list-style-type: none"> <li>• plant radiation protection procedures</li> <li>• emergency preparedness procedures</li> <li>• <del>instrument</del> calibration and test procedures</li> <li>• chemical-radiochemical control procedures</li> <li>• radioactive waste management procedures</li> <li>• maintenance and modification procedures</li> <li>• material control procedures</li> <li>• plant security procedures</li> </ul>	13.5



**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.5-4:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-5:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-6:	A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.	13.5
COL Item 13.5-7:	<p>A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:</p> <ul style="list-style-type: none"> <li>• Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.</li> <li>• A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.</li> <li>• A description of the program for verification and validation of the EOPs.</li> <li>• A description of the program for training operators on the EOPs.</li> </ul>	13.5
COL Item 13.5-8:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.6-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide the following:</p> <ul style="list-style-type: none"> <li>• Security Plans (Physical Security, Security Training and Qualification, and Safeguards Contingency Plans)</li> <li>• proposed site security provisions to be implemented during construction and as modules are completed and become operational of a new plant</li> <li>• portions of the physical security system not located within the nuclear island and structures</li> </ul>	13.6
COL Item 13.6-2:	A COL Applicant that references the NuScale Power Plant design certification will be responsible for the requirements described in Table 5-1 of TR-0416-48929, Rev 0 NuScale Design of Physical Security Systems.	13.6
COL Item 13.6-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a secondary alarm station that is equal and redundant to the central alarm station.	13.6
COL Item 13.6-4:	A COL Applicant that references the NuScale Power Plant design certification will provide Inspections, Tests, Analyses, and Acceptance Criteria for site specific physical security SSCs.	13.6
COL Item 13.6-5:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the Access Authorization Program.	13.6
COL Item 13.6-6:	A COL Applicant that references the NuScale Power Plant design certification will provide a Cyber Security Plan.	13.6
COL Item 13.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for plant operations.	13.7
COL Item 13.7-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for construction.	13.7

## 13.5 Plant Procedures

Administrative and operating procedures are utilized by the operating organization (plant staff) to ensure that routine operating, off-normal, and emergency activities are conducted in a safe manner.

### 13.5.1 Administrative Procedures

COL Item 13.5-1: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-4: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

### 13.5.2 Operating and Maintenance Procedures

#### 13.5.2.1 Operating and Emergency Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-2: 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,~~ and 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.

COL Item 13.5-5: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

COL Item 13.5-6: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.

COL Item 13.5-7: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:

- Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.
- A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.
- A description of the program for verification and validation of the EOPs.
- A description of the program for training operators on the EOPs.

### 13.5.2.2 Maintenance and Other Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-3: 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 describe~~ the classification system, general format, and content objectives, and organizational responsibility for each of 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

COL Item 13.5-8: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

---

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

**eRAI No.:** 8827

**Date of RAI Issue:** 05/30/2017

---

**NRC Question No.:** 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.

---

**NuScale Response:**

In response to this RAI, COL item 13.5-3 has been revised to 1) remove the word "instrument" from the third bullet in the COL item and 2) address the need for COL applicants to provide the descriptions of maintenance and other operating procedures. Further, in response to the last part of this RAI, COL item 13.5-8 has been added 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.

The associated changes to FSAR Section 13.5.2.2 and conforming changes to FSAR Table 1.8-2, Combined License Information Items, are attached.

**Impact on DCA:**

FSAR Section 13.5.2.2 and FSAR Table 1.8-2 have been revised as described in the response above and as shown in the markups provided in this response.

RAI 13.01.01-1, RAI 13.02.02-1, RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

**Table 1.8-2: Combined License Information Items**

<b>Item No.</b>	<b>Description of COL Information Item</b>	<b>Section</b>
COL Item 1.1-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the site-specific plant location.	1.1
COL Item 1.1-2:	A COL Applicant that references the NuScale Power Plant design certification will provide the schedules for completion of construction and commercial operation of each power module.	1.1
COL Item 1.4-1:	A COL Applicant that references the NuScale Power Plant design certification will identify the prime agents or contractors for the construction and operation of the nuclear power plant.	1.4
COL Item 1.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide site-specific diagrams and legends, as applicable.	1.7
COL Item 1.7-2:	A COL Applicant that references the NuScale Power Plant design certification will list additional site-specific P&IDs and legends as applicable.	1.7
COL Item 1.8-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a list of departures from the certified design.	1.8
COL Item 1.9-1:	A COL Applicant that references the NuScale Power Plant design certification will review and address the conformance with regulatory criteria in effect six months before the docket date of the COL application for the site-specific portions and operational aspects of the facility design.	1.9
COL Item 1.10-1:	A COL Applicant that references the NuScale Power Plant design certification will evaluate the potential hazards resulting from construction activities of the new NuScale facility to the safety-related and risk significant structures, systems, and components of existing operating unit(s) and newly constructed operating unit(s) at the co-located site per 10 CFR 52.79(a)(31). The evaluation will include identification of any management and administrative controls necessary to eliminate or mitigate the consequences of potential hazards and demonstration that the limiting conditions for operation of an operating unit would not be exceeded. This COL item is not applicable for construction activities (build-out of the facility) at an individual NuScale Power Plant with operating NuScale Power Modules.	1.10
COL Item 2.0-1:	A COL Applicant that references the NuScale Power Plant design certification will demonstrate that site-specific characteristics are bounded by the design parameters specified in Table 2.0-1. If site-specific values are not bounded by the values in Table 2.0-1, the COL applicant will demonstrate the acceptability of the site-specific values in the appropriate sections of its combined license application.	2.0
COL Item 2.1-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site geographic and demographic characteristics.	2.1
COL Item 2.2-1:	A COL Applicant that references the NuScale Power Plant design certification will describe nearby industrial, transportation, and military facilities. The COL applicant will demonstrate that the design is acceptable for each potential accident, or provide site-specific design alternatives.	2.2
COL Item 2.3-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific meteorological characteristics for Section 2.3.1 through Section 2.3.5, as applicable.	2.3
COL Item 2.4-1:	A COL Applicant that references the NuScale Power Plant design certification will investigate and describe the site-specific hydrologic characteristics for Section 2.4.1 through Section 2.4.14, as applicable.	2.4
COL Item 2.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific geology, seismology, and geotechnical characteristics for Section 2.5.1 through Section 2.5.5, below.	2.5
COL Item 3.2-1:	A COL Applicant that references the NuScale Power Plant design certification will update Table 3.2-1 to identify the classification of site-specific SSC.	3.2
COL Item 3.3-1:	A COL Applicant that references the NuScale Power Plant design will confirm that nearby structures exposed to severe and extreme (tornado and hurricane) wind loads will not collapse and adversely affect the RXB or Seismic Category I portion of the CRB.	3.3
COL Item 3.4-1:	A COL Applicant that references the NuScale Power plant design certification will confirm the final location of structures, systems, and components subject to flood protection and final routing of piping.	3.4

**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.3-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of a near-site emergency operations facility for management of overall licensee emergency response and which complies with the guidance in NUREG-0696, "Functional Criteria for Emergency Response Facilities."	13.3
COL Item 13.3-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a comprehensive emergency plan in accordance with 10 CFR 50.47, 10 CFR 50, Appendix E, 10 CFR 52.48, and 10 CFR 52.79(a)(21).	13.3
COL Item 13.4-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide site-specific information, including implementation schedule, for operational programs:</p> <ul style="list-style-type: none"> <li>• Inservice inspection programs (refer to Section 5.2 and Section 6.6)</li> <li>• Inservice testing programs (refer to Section 3.9 and Section 5.2)</li> <li>• Environmental qualification program (refer to Section 3.11)</li> <li>• Pre-service inspection program (refer to Section 5.2)</li> <li>• Reactor vessel material surveillance program (refer to Section 5.3)</li> <li>• Pre-service testing program (refer to Section 3.9.6, Section 5.2, and Section 6.6)</li> <li>• Containment leakage rate testing program (refer to Section 6.2)</li> <li>• Fire protection program (refer to Section 9.5)</li> <li>• Process and effluent monitoring and sampling program (refer to Section 11.5)</li> <li>• Radiation protection program (refer to Section 12.5)</li> <li>• Non-licensed plant staff training program (refer to Section 13.2)</li> <li>• Reactor operator training program (refer to Section 13.2)</li> <li>• Reactor operator requalification program (refer to Section 13.2)</li> <li>• Emergency planning (refer to Section 13.3)</li> <li>• Process control program (PCP) (refer to Section 11.4)</li> <li>• Security (refer to Section 13.6)</li> <li>• Quality assurance program (refer to Section 17.5)</li> <li>• Maintenance rule (refer to Section 17.6)</li> <li>• Motor-operated valve testing (refer to Section 3.9)</li> <li>• Initial test program (refer to Section 14.2)</li> </ul>	13.4
COL Item 13.5-1:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.	13.5
COL Item 13.5-2:	A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific procedures <del>that licensed operators perform in the control room</del> including normal operating <del>procedures, and</del> abnormal operating procedures, <del>and emergency operating procedures (EOPs), and</del> describe the classification system, <del>for these types of procedures and</del> general format, and content for each classification.	13.5
COL Item 13.5-3:	<p>A COL Applicant that references the NuScale Power Plant design certification will describe the site-specific <del>program for developing</del> maintenance and other operating procedures, <del>including describe</del> the classification system, <del>general format, and content objectives, and</del> <del>organizational responsibility</del> for <del>each of</del> the following types of procedures:</p> <ul style="list-style-type: none"> <li>• plant radiation protection procedures</li> <li>• emergency preparedness procedures</li> <li>• <del>instrument</del> calibration and test procedures</li> <li>• chemical-radiochemical control procedures</li> <li>• radioactive waste management procedures</li> <li>• maintenance and modification procedures</li> <li>• material control procedures</li> <li>• plant security procedures</li> </ul>	13.5



**Table 1.8-2: Combined License Information Items (Continued)**

Item No.	Description of COL Information Item	Section
COL Item 13.5-4:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-5:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.5-6:	A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.	13.5
COL Item 13.5-7:	<p>A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:</p> <ul style="list-style-type: none"> <li>• Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.</li> <li>• A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.</li> <li>• A description of the program for verification and validation of the EOPs.</li> <li>• A description of the program for training operators on the EOPs.</li> </ul>	13.5
COL Item 13.5-8:	A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.	13.5
COL Item 13.6-1:	<p>A COL Applicant that references the NuScale Power Plant design certification will provide the following:</p> <ul style="list-style-type: none"> <li>• Security Plans (Physical Security, Security Training and Qualification, and Safeguards Contingency Plans)</li> <li>• proposed site security provisions to be implemented during construction and as modules are completed and become operational of a new plant</li> <li>• portions of the physical security system not located within the nuclear island and structures</li> </ul>	13.6
COL Item 13.6-2:	A COL Applicant that references the NuScale Power Plant design certification will be responsible for the requirements described in Table 5-1 of TR-0416-48929, Rev 0 NuScale Design of Physical Security Systems.	13.6
COL Item 13.6-3:	A COL Applicant that references the NuScale Power Plant design certification will provide a secondary alarm station that is equal and redundant to the central alarm station.	13.6
COL Item 13.6-4:	A COL Applicant that references the NuScale Power Plant design certification will provide Inspections, Tests, Analyses, and Acceptance Criteria for site specific physical security SSCs.	13.6
COL Item 13.6-5:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the Access Authorization Program.	13.6
COL Item 13.6-6:	A COL Applicant that references the NuScale Power Plant design certification will provide a Cyber Security Plan.	13.6
COL Item 13.7-1:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for plant operations.	13.7
COL Item 13.7-2:	A COL Applicant that references the NuScale Power Plant design certification will provide a description of the applicant's 10 CFR 26 compliant fitness-for-duty (FFD) program for construction.	13.7

## 13.5 Plant Procedures

Administrative and operating procedures are utilized by the operating organization (plant staff) to ensure that routine operating, off-normal, and emergency activities are conducted in a safe manner.

### 13.5.1 Administrative Procedures

COL Item 13.5-1: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific procedures that provide administrative control for activities that are important for the safe operation of the facility consistent with the guidance provided in RG 1.33, Revision 3.

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-4: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of administrative procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

### 13.5.2 Operating and Maintenance Procedures

#### 13.5.2.1 Operating and Emergency Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-2: 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,~~ and 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.

COL Item 13.5-5: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of operating and abnormal operating procedures including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.

COL Item 13.5-6: A COL applicant that references the NuScale Power Plant design certification will describe the site-specific emergency operating procedures (EOPs), describe the classification system, general format, and content for each classification.

COL Item 13.5-7: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of EOPs, including a target date for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures. Included in the submittal is the Procedures Generation Package, consisting of the following:

- Plant Specific Technical Guidelines, which are guidelines based on analysis of transients and accidents that are specific to the COL applicant's plant design and operating philosophy. The COL applicant will reference the generic technical guidance when developing the plant-specific technical guidelines.
- A plant-specific writer's guide that details the specific methods to be used by the COL applicant in preparing EOPs based on the Plant Specific Technical Guidelines.
- A description of the program for verification and validation of the EOPs.
- A description of the program for training operators on the EOPs.

### 13.5.2.2 Maintenance and Other Operating Procedures

RAI 13.05.02.01-2, RAI 13.05.02.01-3, RAI 13.05.02.01-4

COL Item 13.5-3: 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 describe~~ the classification system, general format, and content objectives, and organizational responsibility for each of 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

COL Item 13.5-8: A COL applicant that references the NuScale Power Plant design certification will provide a plan for the development, implementation, and control of maintenance and other operating procedures, including target dates for completion. Additionally, the COL applicant will identify the group within the operating organization responsible for maintaining these procedures.