

November 4, 2021

Docket No. 99902078

U.S. Nuclear Regulatory Commission
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SUBJECT: NuScale Power, LLC Submittal of Presentation Materials, "NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update," PM-108874, Revision 0

NuScale Power, LLC (NuScale) has requested a meeting with the NRC technical staff on November 9, 2021, to discuss the NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update.

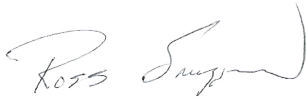
The purpose of this submittal is to provide presentation materials to the NRC for use during this meeting.

The enclosure to this letter is the nonproprietary presentation entitled, "NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update."

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

If you have any questions, please contact Nadja Joergensen at 541-452-7338 or at njoergensen@nuscalepower.com.

Sincerely,



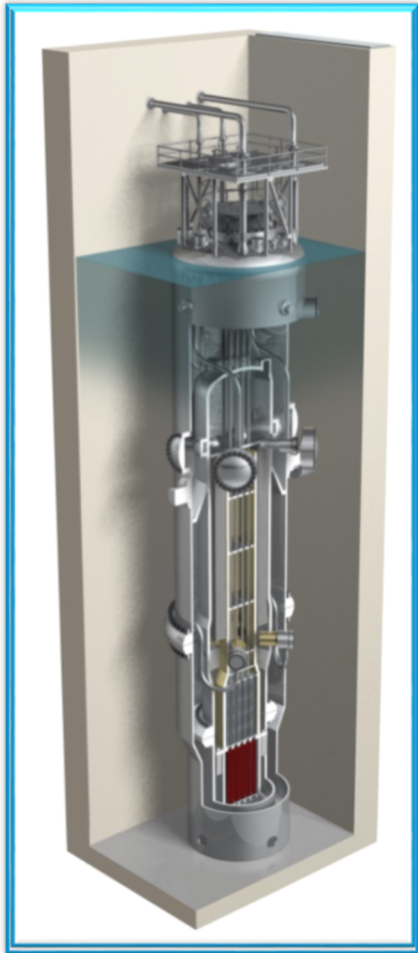
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Enclosure: "NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update," PM-108874, Revision 0

Enclosure:

“NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update,” PM-108874, Revision 0



NuScale Accredited Centralized Training Facility and National Academy for Nuclear Training guidance document update

November 9, 2021

Presenters

Patrick Leary

Senior Reactor Operator

Doug Bowman

Supervisor, Plant Operations

Tim Tovar

Director, Plant Operations

Purpose of Public Meeting

- Seeking NRC input as a key stakeholder concerning NuScale's ongoing discussions with INPO staff concerning regulatory considerations associated with the direct accreditation of a centralized vendor (NuScale) training facility.
- Provide an update to the NRC staff on current efforts related to the development of the NuScale operator licensing program and entry requirements.

How a NuScale training facility fits into existing accreditation structure

Introduction

NuScale Centralized Training Facility (CTF)

- Nuclear power plant training programs are required to be “derived from a systems approach to training” (SAT)
 - 10 CFR 50.120 Training & Qualification of Nuclear Power Plant Personnel
 - 10 CFR 55 Operators’ Licenses (including training and examination)
- Training programs at current plants commonly hold INPO accreditation
 - Ensures SAT training processes are followed
 - NRC staff can use the NRC/INPO Memorandum of Agreement to monitor the accreditation process (Each licensee separately accredits their own programs)
- INPO and NuScale have been discussing directly accrediting a CTF by a vendor
 - Offers opportunity to deliver higher quality and more consistent training across the entire fleet
 - Enhances the access to common operational experience
 - Also lowers overall cost and administrative burden for multiple sites sharing a common plant design, which also can be translated into improved training resources

Relationship between NRC and INPO - Overview

NUREG-0737, Three Mile Island Action Plan

- Kemeny Commission Recommendations
 - Initiated a broad scope of industry training improvement
 - **Recommended agency-accreditation of training institutions**
- Nuclear Industry proposed INPO accreditation as a self-regulating means to comply
 - Received NRC endorsement following a two-year trial period
- NRC staff retains overall oversight responsibility for licensee compliance
 - Coordinated by a **Memorandum of Agreement** between NRC and INPO

Memorandum of Agreement

- NRC monitors implementation of accrediting process, but doesn't participate.
 - Observes accreditation team visits
 - Observes National Nuclear Accrediting Board
 - Done in lieu of direct NRC inspections to assess each licensee training program
- NRC publishes an annual report on effectiveness of nuclear industry training programs
 - Based on industry data and the results of operator licensing inspection and oversight activities

INPO Industry Training & Proficiency / NuScale Operations Interactions

- Quarterly Check-in Meeting topics
 - Operator Licensing path for future NuScale operators
 - Ongoing discussion exploring the direct accreditation option
- NuScale recommendations for changes to guidance to support direct accreditation of a vendor CTF
 - ACAD 08-001, The Process for Initial Accreditation of Training in the Nuclear Power Industry, Revision 3
 - ACAD 02-002, The Process for Maintaining Accreditation of Training, Revision 6
- Well received at INPO
- Requested NuScale present to the NRC as a key stakeholder

Impact of Direct Accreditation of CTF

- NRC addresses compliance with training requirements for each licensee individually (by each docket holder)
- INPO direct accreditation of a CTF would, potentially, include multiple licensees
 - Ultimately, each licensee would still be responsible for compliance
- The NRC Federal Register entry that established the rule includes a discussion on Vendor-Developed Programs for Standardized Plants (using 10 CFR part 52)
 - Allows for the use of vendor training but emphasizes that the responsibility is that of the licensee

Vendor-Developed Programs for Standardized Plants

- The concept of vendor training programs was addressed in the original licensing action:
 - “In 10 CFR part 52, the Commission articulated the goal of safety through standardization of design. The Commission believes that the benefits of standardization could involve the standardization of some types of training associated with the 10 CFR part 52 design certification. Therefore, nothing in this rule is intended to preclude standard training programs being developed or implemented by a vendor. Thus, the requirements for personnel training programs prescribed **by § 50.120** do not prevent a vendor from training personnel or from developing a training process. However, it is important to note that vendor training programs are not governed **by** this rule and that the licensee is ultimately responsible for ensuring that personnel are qualified.”

Update on NuScale Recommended License Operator Training Program & Entry Requirements

Introduction

Licensed Operator Training Program entry requirements

- Minimum education and experience requirements are established for entry into License Operator Training programs
- The requirements were in numerous documents
 - NUREG-1021, Operator Licensing Examination Standards for Power Reactors
 - Regulatory Guide 1.8, Qualification and Training of Personnel for Nuclear Power Plants
 - ANSI/ANS-3.1-2014, Selection, Qualification, and Training of Personnel for Nuclear Power Plants
 - ACAD 10-001, Guidelines for Initial Training and Qualification of Licensed Operators
- Recently, the NRC revised NUREG-1021 to defer to/endorse ACAD 10-001 as the single location for these requirements

Efforts to add new guidance for NuScale Operators

INPO/ NuScale Quarterly Check-In Meetings

- NuScale recommendations shared with INPO
 - Provided as mark up of ACAD 10-001 Revision 2
- INPO staff deferred the recommendations while revising ACAD 10-001 to align with the new NUREG-1021, Revision 12
- ACAD 10-001 revision 2 is now published, and INPO staff is ready to consider the NuScale recommendations
 - NuScale's mark up of ACAD 10-001, Revision 2
 - Requested NuScale engage with the NRC as key stakeholder, prior to moving forward with review and approval of a change

Reactor Operator program entry requirements

Retain the same minimum education requirement

- High school diploma or equivalent

Update the experience requirement

- Existing Fleet Guidance
 - At least 18 months nuclear experience
 - or -
 - 27 months of power plant experience
 - ❖ Additional specific requirements based on type of nuclear facility and type of duties: 6 – 18 months
- Proposed ADPCR Guidance
 - At least 6 months **design specific** nuclear experience
 - or -
 - 12 months of power plant experience (**includes experience at other nuclear designs**)

Senior Reactor Operator program entry requirements

Update both education and experience requirements

Existing Fleet Guidance

- 4 different categories
 - RO upgrade candidates: 12 months experience
 - RO experience at other commercial or military reactors: 12* – 18 months
 - BS Engineering Degree – plus 18 – 36 months RNPE experience at this site
 - Certified SRO Instructors: 4 – 6 years experience

Proposed ADPCR Guidance

- 4 different categories
 - RO upgrade candidates: 12 months experience
 - RO experience at other commercial or military reactors: 18 months
 - AS Technical Degree plus 12 months RNPE experience at this site
 - Certified SRO Instructors: 18 months experience

Cold Licensing Requirements

Different requirements are needed for licensing operators during new construction and initial operation (cold licensing)

- Normal “in-field” SAT program elements can’t be done until after the plant is built
- Additional non-traditional work experience and observation program method used

Vogtle 3&4 and VC Summer 2&3 cold license plan

- Developed in NEI 06-13A, Template for an Industry Training Program
- Endorsed by NRC SER, and incorporated by reference into their combined license (COL)
 - Created Hot Plant Observations, Practical Work Experience, Site Layout Course and Participation in Pre-Operational Test Program requirements
 - Allows “Alternate Cold License Methods for OJT/TPE”
 - Added a Crew Cumulative Work Experience requirement during plant startup

Using ACAD 10-001 for Cold Licensing

Conflict:

- The SER endorses older Reg. Guide 1.8 and ANSI/ANS-3.1 revisions that no longer align with the latest revision of NUREG-1021
- There are lessons learned from Vogtle 3&4/ VCS 2&3 that can be incorporated
- The guidance does not work for NuScale control room staffing plan, and may not work for other designs with alternate staffing plans
 - Based on a five-person crew with Shift Technical Advisor

Path to Success

- Earlier revisions of ACAD 10-001 included parts of the NEI 06-13A Cold License Plan
- NuScale recommendations adding/ updating the cold licensing requirements in a new section: Cold Licensing of Advance Design Passively Cooled Reactors

Questions?

Abbreviation and Acronyms

ACAD	National Academy for Nuclear Training Academy document
ADPCR	Advance Design Passively Cooled Reactor
ANS	American National Standards
ANSI	American National Standards Institute
CFR	Code of Federal Regulations
COL	Combined License
CTF	Centralized Training Facility
INPO	Institute of Nuclear Power Operations
MOA	Memorandum of Agreement
NANT	National Academy for Nuclear Training
NEI	Nuclear Energy Institute
OJT/ TPE	On-the-Job Training/ Task Performance Evaluation
RO	Reactor Operator
SAT	Systematic Approach to Training
SER	Safety Evaluation Report
SRO	Senior Reactor Operator

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