

Clarifying Questions for NEI-23-01, "Operator Cold License Training Plan for Advanced Nuclear Reactors," Revision 1

1. Crew cumulative nuclear power plant experience (definition on page 2 and in Table 1 page 15)

Why did NEI limit this to nuclear plant experience? Is there any credit for power plant experience. (Reference NEI 06-13A: 3.1.2 Crew Experience Requirements during First Year of Operation which states: *The cumulative NPP experience for each operating crew shall be greater than six years. The cumulative power plant experience for each operating crew shall be greater than 13 years.*)

What is the basis for 24 months of crew cumulative nuclear power plant experience? Using the equivalencies in Table 1, the 24-month experience could be satisfied by a crew with only one member having 6 months of hot plant experience. (Reference NEI 06-13A which requires 6 years for cumulative nuclear power plant experience.)

That staff does not have a lot of information about crew sizes for advanced reactors. For example, if the crew is two people, then per NEI 23-01 guidelines, one member of each crew must be a previously licensed RO or SRO. Is that an accurate application of NEI 23-01, and is that going to be too limiting for staffing? (Reference NEI-06-13A which states that each operating crew shall be staffed with at least one SRO with hot plant experience)

2. Figure 2: ANR SRO Eligibility and Training Requirements for Personnel with Education Backgrounds During Construction Phase (page 13)

According to NEI 23-01, the only difference between RO and SRO eligibility, if the SRO candidate does not have a 2- or 4-year degree is that the SRO candidate must "pass screening criteria."

According to NEI 23-01 page 5, *SRO candidates will generally fall into two categories, those with previous nuclear experience and those with an educational background.*

Why is power plant experience for SRO candidates not considered in the Figure 2 flow chart?

According to NEI 23-01 page 6, *Establishing SRO candidate eligibility using the High School Diploma, or equivalent, and additional screening path does not mean that this individual is directly out of high school. This individual could be a fossil plant operator with years of experience, but one that only completed their high school education before coming into the workforce. Their experience and informal training would qualify them from a leadership capacity, but additional training may be required to ensure they are ready for an SRO position at a nuclear facility.*

3. Degree in Science or Applied Science (definition on page 2)

Degrees from natural sciences are not credited. What are considered the "natural sciences"?

4. NEI 23-01 page 11 states that *If the candidate has a **Degree in Science or Applied Science**, or has previous nuclear experience, then the internal screening criteria described in Section 3.1 is not required.* How does a two-year degree prepare an SRO for the supervisory position? Would power plant experience be a better indicator of command-and-control skills?

The information in Appendix A is focused on the education component of eligibility but does not provide a basis for reductions made to experience requirements for SROs. The staff notes the value of power plant experience in preparing an SRO for the decision-making aspect of the job.

Are there any examples of “leadership assessments” the staff could use to understand the role of this tool in selecting SRO candidates?

(Reference NEI 06-13A: *Candidates for a Senior Reactor Operator license shall have at least one of the following qualifications:*

- *Previously held a Senior Reactor Operator license for an operating nuclear power plant*
- *Previously held a Reactor Operator license for an operating nuclear power plant.*
- *Bachelor’s degree in engineering or science as defined by R.G. 1.8 Revision 3.*
- *Experience as a licensed operator training instructor with an SRO certification.*
- *Two years military experience in a position equivalent to a reactor operator.)*

5. Practical Work Experience (definition on page 4)

What is the basis for 3 months of practical work experience (as compared to 6 months on site for operating reactors and NEI 06-13A which requires 6 months of practical work assignments)?

(Comment) Without having much operations/human factors information about microreactors, that staff is challenged to understand that basis for 1 month of practical work experience for micro-reactors.

6. On November 20, 2014 (reaffirmed in 2020), ANSI/ANS-3.1-2014, “Selection, Qualification, and Training of Personnel for Nuclear Power Plants,” was issued. Revisions to the standard align the ANS, NRC, and INPO with industry selection, training, and qualification standards; provide for a common language across the industry; address supplemental personnel training and qualification; and update previous positions in light of new nuclear power plant construction, current position terminology, and evolving technology. The NRC endorses ANSI/ANS-3.1-2014, with certain exceptions and clarifications that are listed in the NRC staff RG 1.8, Revision 4.

Has NEI considered using the consensus standards process to address new guidelines/needs for advanced nuclear reactors in the areas of education and experience?