

August 11, 2009

MEMORANDUM TO: Frederick D. Brown, Director  
Division of Inspection and Regional Support (DIRS)  
Office of Nuclear Reactor Regulation

FROM: John Munro, Acting Chief */RA/*  
Operator Licensing and Human Performance Branch (IOLB)  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE JULY 13, 2009, PUBLIC MEETING WITH THE  
INSTITUTE OF NUCLEAR POWER OPERATIONS TO DISCUSS  
GUIDELINES FOR INITIAL TRAINING AND QUALIFICATION OF  
LICENSED OPERATORS

On July 13, 2009, the DIRS staff conducted a public meeting with the Institute of Nuclear Power Operations (INPO) at NRC Headquarters in Rockville, Maryland. INPO had requested the meeting to review a revision to the licensed operator eligibility criteria that are described in ACAD-09-001 (formerly ACAD-00-003), "Guidelines for Initial Training and Qualification of Licensed Operators," a document published by the National Academy for Nuclear Training. A list of meeting attendees is enclosed.

The discussion focused on the enclosed draft revision of the flowcharts used by facility licensees to determine whether reactor operator (RO) and direct senior reactor operator (SRO) candidates are eligible to enter the license training program. The staff generally supported INPO's intent to combine the flowcharts for degreed plant staff engineers (Figure 2-3) with that for degreed supervisors and non-licensed operators (Figure 2-4). The staff noted that the combined flowchart limits the academic equivalence provision to 18 months, which exceeds the 1-year limit in Regulatory Guide 1.8, Revision 3, "Qualification and Training of Personnel for Nuclear Power Plants," but is a reduction from the 2-year limit in current Figure 2-3, and agreed to provide feedback if management does not support the change. The staff also provided feedback on the RO Eligibility flowchart (Figure 2-1) and some of the terminology used in the flowcharts (e.g., comparable facility, degree equivalence, and experience) to enhance consistency with other guidance documents such as ANSI/ANS-3.1, "American National Standard for Selection, Qualification, and Training of Personnel for Nuclear Power Plants," which will also be undergoing revision.

No final positions were taken during the meeting. INPO is considering the staff's input and may request another meeting prior to finalizing its ACAD revision.

Please let me know if you have any questions.

Enclosures: As stated

CONTACT: Sean Currie, NRR/DIRS/IOLB  
301-415-3967

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SHansell, RI

MWidmann, RII

HPeterson, RIII

RLantz, RIV

RPelton, NRO

**ATTENDEES**

**INPO-NRC Public Meeting, July 13, 2009**

**Institute of Nuclear Power Operations**

Kent Hamlin  
Mike Llewellyn

**Industry (Operator Licensing Focus Group)**

Gregg Ludlam  
Chuck Sizemore  
Russell Smith

**ANS**

Timothy Dennis

**Areva**

Tom Graham

**Wolf Creek**

Mona Gier\*  
Diane Smith\*

**Curtiss-Wright**

Deanne Raleigh\*

**South Texas**

Michael DeFrees\*

**Nuclear Regulatory Commission**

Michael Cheok  
John Munro  
Sam Hansell\*  
Malcolm Widmann\*  
Hironori Peterson\*  
Ryan Lantz  
Fred Guenther  
Rick Pelton  
Jim Kellum  
Tim Kolb  
Sean Currie

\* Via teleconference

Enclosure 1

**Definitions to be incorporated in ACAD 09-01 future revision:**

**Power Plant Experience** -- Applicable work performed in fossil-fueled or nuclear fueled electric power production plant during preoperational, startup testing, or operational activities.

**Responsible Nuclear Power Plant Experience** -- Responsible nuclear power plant experience for a Senior Reactor Operator (SRO) is having actively performed as a designated licensed nuclear control room operator (RO) or as power plant staff (described below) involved in the day-to-day activities at a commercial nuclear power plant facility.

**Power Plant Staff** – A manager, supervisor, or staff engineer responsible for the coordination and implementation of any of the following at the current or a comparable (BWR/PWR) commercial nuclear power plant:

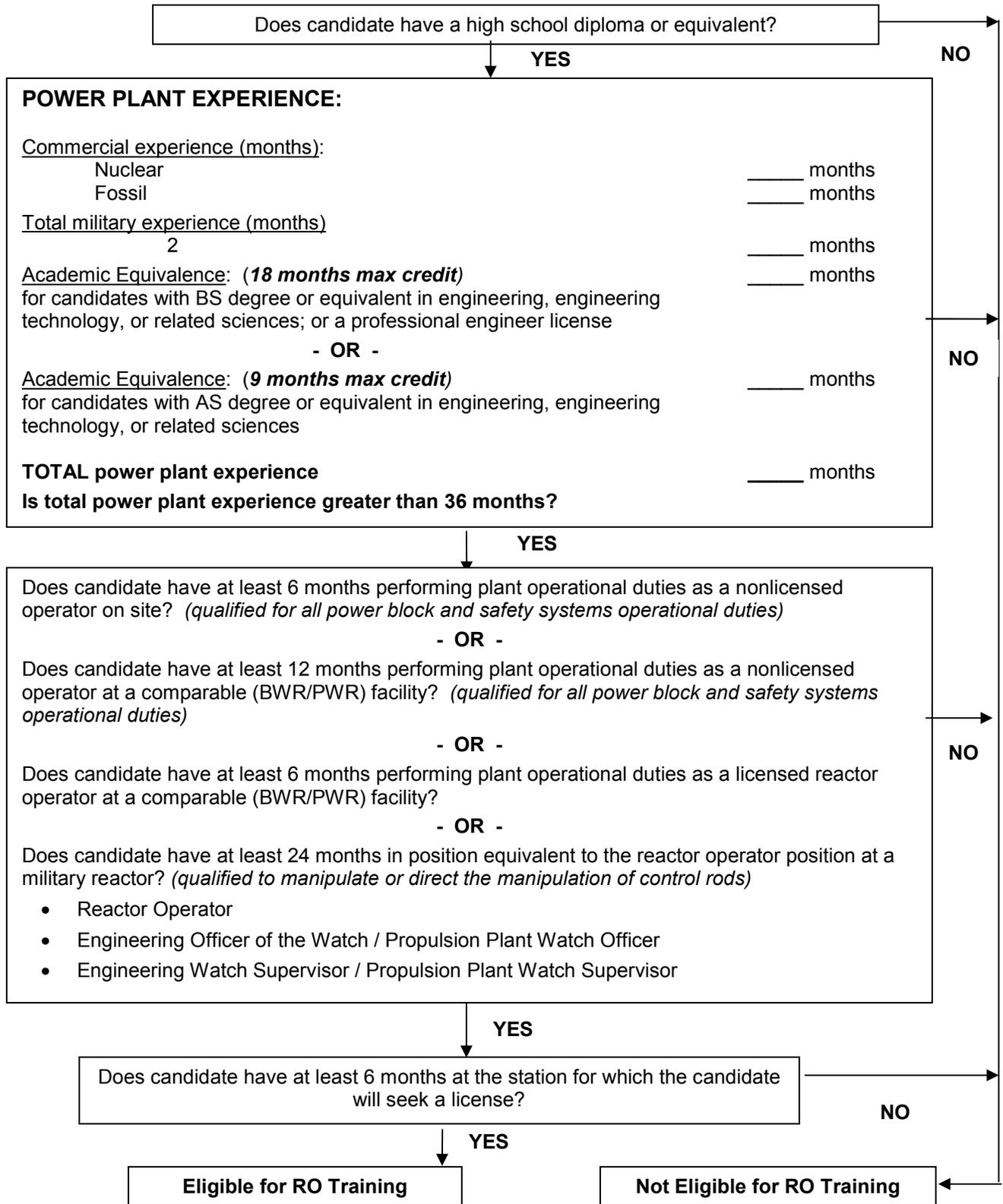
- plant equipment controls,
- integrated operations procedures,
- operations,
- maintenance,
- radiological support,
- reviews of plant modifications
- maintenance planning for plant systems
- work controls
- chemistry
- training

**Total Military Experience** -- the start date for calculating total military experience is that date when military nuclear power plant-related initial training is completed. For United States Navy personnel, this is the date that the candidate graduates from nuclear power school prototype training. For other military personnel, similar dates for candidate training completion are used for calculation. End dates are calculated using military discharge dates or dates the candidate transferred to a non-nuclear power plant military position.

**Qualified Non-licensed Operator** -- Qualified for all power block and safety systems operation at the current or a comparable (BWR/PWR) facility.

**Comparable (BWR/PWR) Facility** – prior experience accepted for work at a commercial power reactor of either BWR or PWR design regardless of vendor or vintage within that reactor design type.

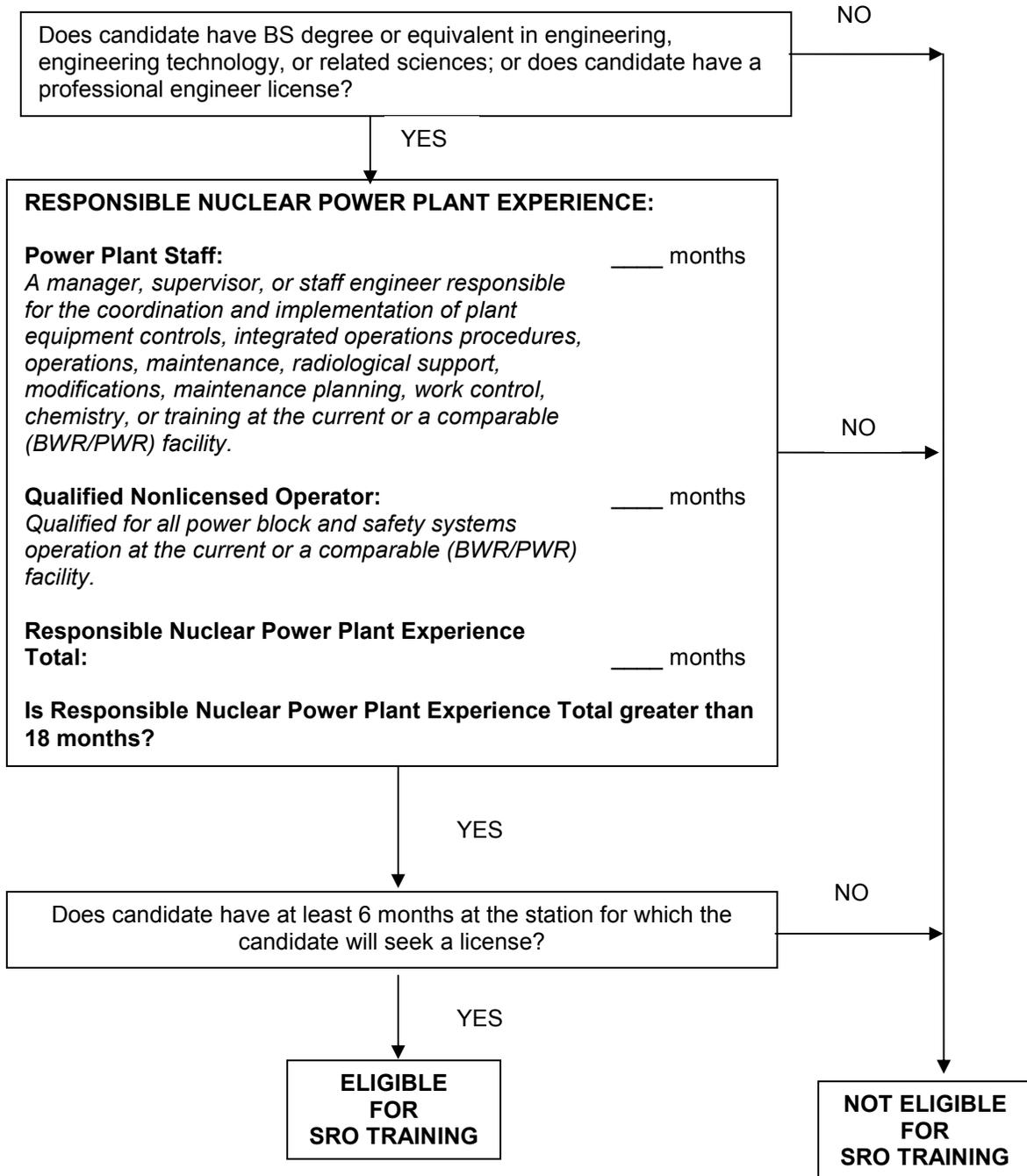
**Figure 2-1: Reactor Operator Eligibility**



## NOTES:

1. This flowchart aligns with direct SRO flowchart in that it allows 18 months academic credit towards the 36 month Power Plant Experience requirement for RO candidates with BS degree or equivalent in engineering, engineering technology, or related sciences; or a professional engineer license.
2. This flowchart allows 9 months academic credit towards the 36 month Power Plant Experience requirement for RO candidates with AS degree or equivalent in engineering, engineering technology, or related sciences.
3. The 6-months onsite requirement for the RO candidate matches that required for the SRO candidate. This is consistent with ANS 3.1 which requires 6-months onsite for the RO candidate.
4. This flowchart allows candidates (1) with military  $\geq 24$  months as an RO or direct supervisor of an RO - **or** – (2) those candidates qualified for  $\geq 12$  months as an NLO at a comparable facility - **or** – (3) those candidates with a prior RO license for  $\geq 6$  months at a comparable facility, to **NOT** have to qualify as an NLO at the facility for which RO license is sought. These candidates would be allowed to enter RO program once they meet the 6 months onsite requirement.
5. A BS degree candidate hired upon graduation would need 18 months additional power plant experience (to get to 36 months required) and, during that 18-month period, would need to qualify and spend at least 6 months as a qualified NLO.
6. An AS-degree candidate hired upon graduation would need 27 months additional power plant experience (to get to the 36 months required) and during that 27-month period, would need to qualify and spend at least 6 months as a qualified NLO.

**Figure 2-3 and Figure 2.4 Combined:  
Senior Reactor Operator Eligibility - Direct SRO for Degreed Personnel**



## NOTES:

- This flowchart combines current Figure 2.3 and 2.4 flowcharts into one.
- Changes word “physical” sciences to “related” sciences to align with ANS 3-1.
- Power Plant Staff Experience definition more closely aligns with R.G. 1.8 definition of “Staff Engineer” with the exception that we are adding the “chemistry” and “training” functions to the list of eligibility. We have always included those two positions historically in our ACAD. Also, the chemistry position is recognized within this grouping in ANS.3-1.
- Time required in position before becoming eligible for direct SRO in our current chart 2.3 (for the engineer enrolled in the ESP accredited training program) would increase from 12 months to 18 months. The new flowchart no longer ties staff engineer to enrollment in the accredited engineering training program.
- Time required in position for Power Plant Staff personnel (managers, supervisors, and staff engineers) will recognize academic credit of 18 months for the specified BS degree, and thus will decrease from 36 months to 18 months (as compared with current chart 2.4).
- Flowchart would continue to require that all candidates have 6-months onsite before they enter class.
- A college graduate with the specified BS degree hired upon graduation into a position covered under the definition of “Power Plant Staff” would be eligible to enter SRO training in 18 months onsite (would meet 6 months onsite within this period).
- An experienced “Power Plant Staff” employee with the specified BS degree who is hired from another utility from a similar reactor type (BWR/PWR) and has 18 or more months in a “Power Plant Staff” position at the other utility would be eligible for SRO training after meeting the 6 months onsite criteria. If from a different reactor type – they must meet 18 months performing “Power Plant Staff” duties at the site before they are eligible for SRO training (would meet 6 months onsite within this period).
- An experienced “Qualified NLO” employee with the specified BS degree who is hired from another utility from a similar reactor type (BWR/PWR) and has 18 or more as a “Qualified NLO” would be eligible for SRO training after meeting the 6 months onsite criteria. If from a different reactor type – they must meet 18 months performing “Power Plant Staff” duties (or may opt to qualify as an NLO and spend 18 months of “Qualified NLO” duties at the site) before they are eligible for SRO training (would meet 6 months onsite within this period).
- An experienced employee with the specified BS degree who is hired from another utility from a similar reactor type (BWR/PWR) who has a **combination** of both “Power Plant Staff” time and “Qualified NLO” time that is equal to or greater than 18 months would be eligible for SRO training after meeting the 6 months onsite criteria. If from a different reactor type – they must meet 18 months performing “Power Plant Staff” duties or “Qualified NLO” duties at the site before he/she is eligible for SRO training (would meet 6 months onsite within this period).