

## **NRC Operator License Eligibility Requirements (National Academy of Nuclear Training Guideline Summary)**

This document provides information for personnel to make informed educational and work experience decisions when pursuing a career as a licensed nuclear plant operator. In addition to educational and experience requirements described below, candidates must also meet medical requirements outlined in industry standards and regulatory requirements (10CFR 55.21).

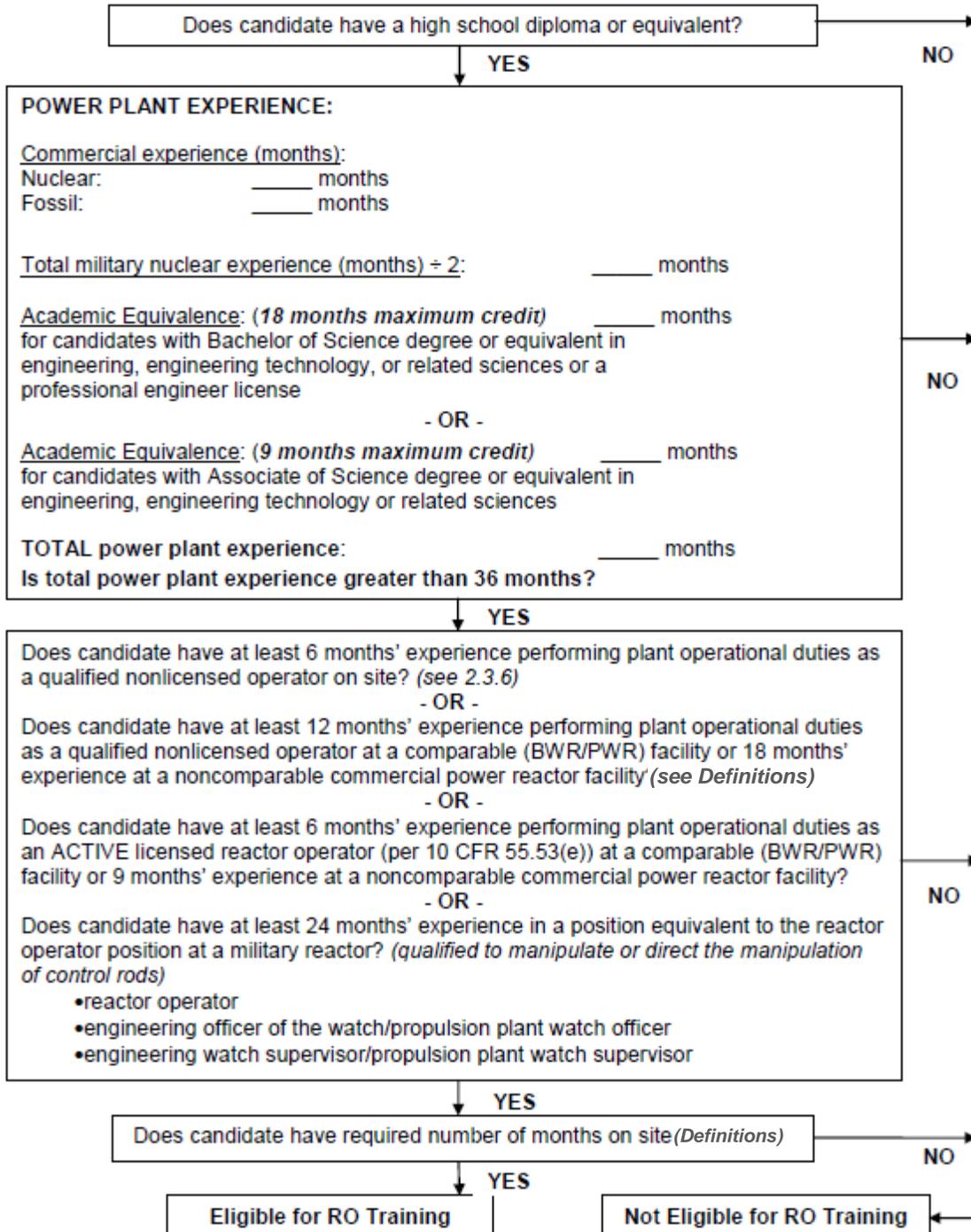
The eligibility requirements must be met for a potential candidate to enter a training program to obtain an NRC license. To obtain an NRC operating license, candidates must successfully complete a comprehensive training program at a nuclear site and pass a comprehensive examination administered by the Nuclear Regulatory Commission. The site training programs are usually 18 to 24 months in duration. The NRC exam consists of a written exam and a performance exam typically conducted over a two-week period.

Educational and experience requirements are based on industry and regulatory guidance. As noted in the eligibility flow charts, the power plant experience requirements may be met by experience gained at the site reactor, other commercial reactors or military reactors. In some cases, experience requirements may also be met by a combination of experience and education, as outlined in the eligibility flow charts. In all cases, candidates must possess a high school diploma or equivalent. Prior to entering the training program, the candidate must also have a minimum amount of time at the specific nuclear plant. This time requirement is defined in the definitions section under *On-Site Requirement* and is generally factored into the hiring process for licensed candidates hired from outside the specific nuclear station.

An individual interested in entering the nuclear industry directly from college with a goal of obtaining an operating license should pursue a Bachelor's Degree in related sciences, as defined in the definitions section.

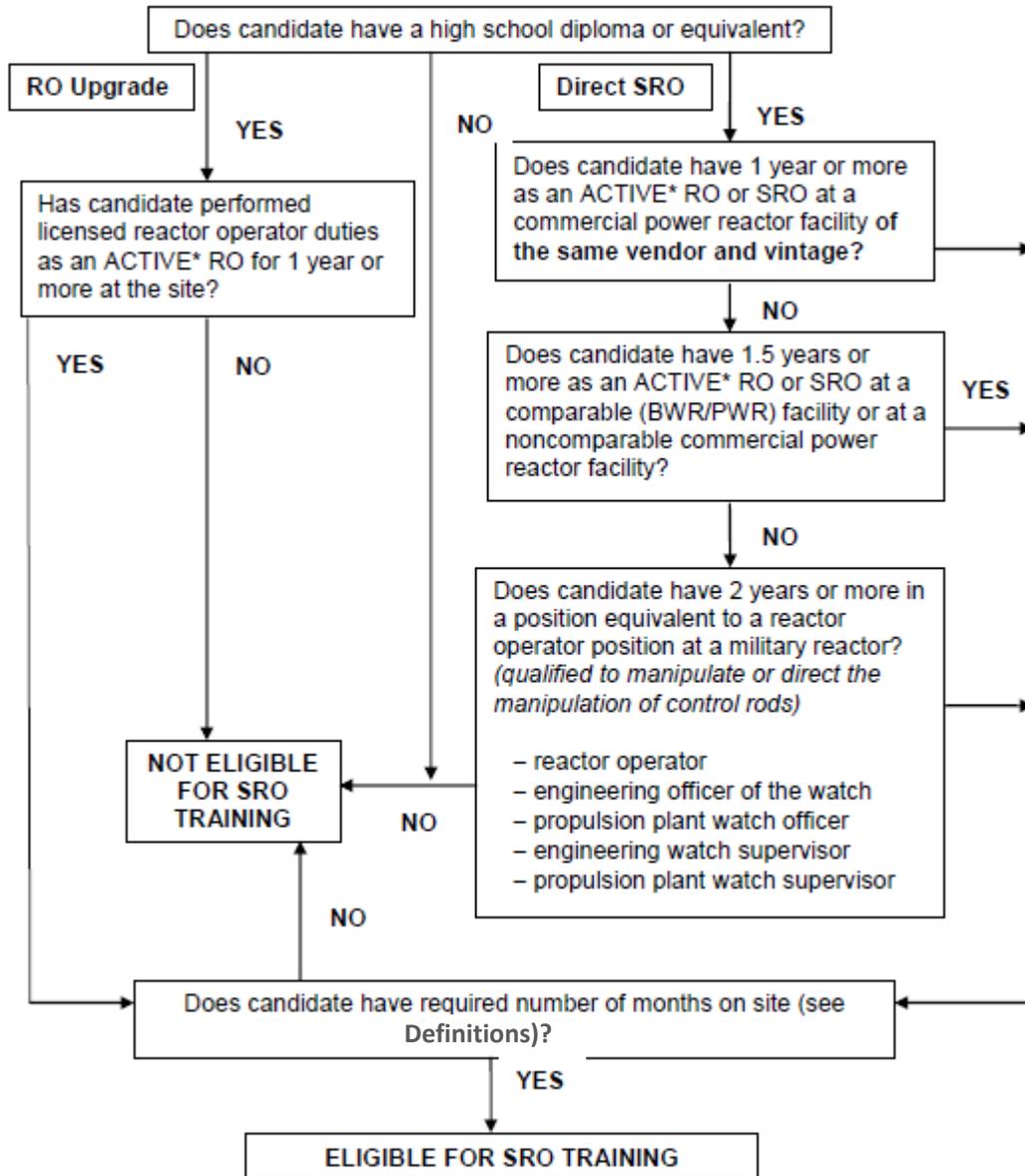
This document contains eligibility flow charts, related notes, and a list of applicable definitions. Additional license requirements and regulatory guidance related to obtaining a license can be found in the Code of Federal Regulations Title 10 section 55 (10CFR55) available on the NRC webpage.

**Eligibility Requirements for Reactor Operator**



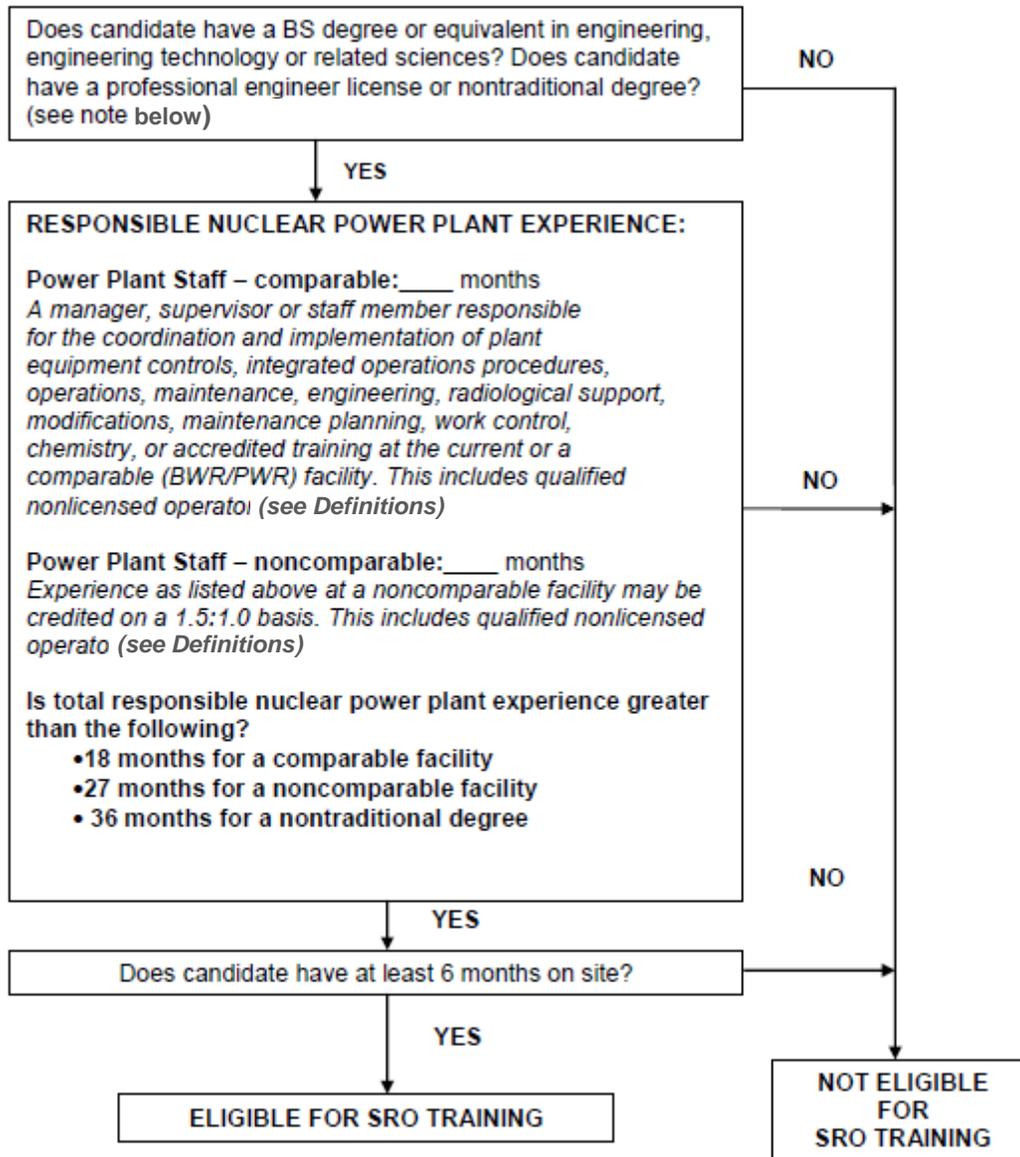
**Eligibility Requirements for Senior Reactor Operator (Path 1)**

*This path is based on prior experience operating a nuclear reactor either as a licensed RO, SRO, or in specific positions in the Nuclear Navy.*



**Eligibility for Senior Reactor Operator (Path 2)**

*This path is based on the candidates possessing a BS degree in an appropriate field along with power plant experience (See definitions)*



### Notes related to the flow charts

1. A college graduate with the specified BS degree who is hired upon graduation (no prior responsible nuclear power plant experience) into a position covered under the definition of power plant staff would be eligible to enter SRO training. As long as they possessed the minimum of 18 months' responsible nuclear power plant experience, (assuming the candidate would concurrently meet the 6-month on-site requirement within this period).
2. An experienced power plant staff employee with the specified BS degree who is hired from another utility with a similar reactor type (BWR/PWR) and who 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-month on-site criterion. This includes qualified nonlicensed operators.
3. An experienced power plant staff employee with the specified BS degree who is hired from another utility and who has experience on a non-comparable (BWR/PWR) reactor type can receive responsible nuclear power plant experience credit on a 1.5-to-1.0 basis. This employee would need a minimum of 27 months in a power plant staff position at the other utility to meet 18 months of performing such duties before being eligible for SRO training (assuming the candidate would concurrently meet the 6-month on-site requirement within this period). This includes qualified non-licensed operators.
4. For military personnel with the specified BS degree and requisite military nuclear experience (qualified in the military to manipulate control rods or supervise the manipulation of control rods), the SRO flow chart Path 1 would be used to determine direct SRO eligibility. If the candidate is not qualified in those positions in the military, the employer may use the SRO flow chart Path 2 with no credits for military time. The candidate would need 18 months in a power plant staff position or 18 months as a qualified nonlicensed operator to meet the responsible nuclear power plant experience eligibility requirements for SRO training.
5. Individuals with degrees other than a BS or equivalent in engineering, engineering technology or related sciences will not be eliminated from consideration automatically when other factors provide sufficient demonstration of their abilities. These other factors are to be evaluated on a case-by-case basis and approved and documented. Other factors that could be considered include experience in leadership skills, command and control, and use of technology. This is an exception to the definition of related sciences. Examples include individuals having military academy degrees or security/ law enforcement degrees. The applicable responsible nuclear power plant experience must still be satisfied for entry into the program.

## Definitions

**Comparable (BWR/PWR) Facility** – This term describes a commercial power reactor of either BWR or PWR design, regardless of vendor or vintage within that reactor design type.

**Experience Substitution for Education** – Related experience may be substituted for education at the rate of 6 semester credit hours for each year of experience up to a maximum of 60 hours of credit.

**On-Site Requirement** – The prerequisite on-site time requirement is normally six months, with exceptions noted below. Time spent in plant access, radiation worker, or utility new employee orientation training and time spent in classroom training for the intended position do not count toward the on-site requirement. However, time spent in an RO or SRO licensed operator plant based orientation program counts toward the on-site requirement. Time spent in a structured, job-related development program and job-based training and qualification activities in the plant can be applied toward the On-site requirement as well.

The on-site time requirement may be relaxed to three months for candidates who were previously licensed operators or qualified non-licensed operators at another commercial nuclear facility with fewer than 30 days break in employment before joining the current facility for which a license is being sought. Additionally, the on-site time requirement may be relaxed to three months for previously licensed or non-licensed operators transferring from one facility to another within the same utility, having common programs and processes. This shortened three-month on-site requirement should not include participation in the licensed operator training program.

**Power Plant Experience** - Describes applicable work performed in fossil-fueled or nuclear-fueled electric power production plants during preoperational, startup testing or operational activities. Experience in petrochemical; similar process plants; or steam propulsion plant design, construction, technical support, operation, maintenance, or training instruction can be substituted for applicable power plant experience. Simply observing others perform work is not considered power plant experience. Additionally, time spent in classroom training cannot be counted toward power plant experience requirements. Time spent in a structured, job-related development program and job-based training and qualification activities in the plant can be applied toward power plant experience requirements. Time spent performing in-plant job-based training and qualification activities should be specifically documented if such time is used to meet power plant experience requirements.

**Power Plant Staff** – This term refers to a manager, supervisor or staff member, including corporate personnel, responsible for the coordination and/or implementation of any of the following:

- plant equipment controls
- integrated operations procedures
- chemistry
- maintenance
- engineering
- operations
- modifications
- maintenance planning
- accredited training
- licensing/regulatory affairs
- radiological support
- work control

**Qualified Non-licensed Operator** – This term describes an operator qualified for all power block and safety systems operation. Time as a qualified non-licensed operator counts from the day the last such power block or safety system watchstation qualification is attained. Examples of qualified non-licensed operators are as follows:

- PWR: qualified in auxiliary and turbine building watchstations and any outside or other watchstation in which safety systems are monitored, such as emergency diesel generators and safety-related cooling water pumps
- BWR: qualified in reactor and turbine building watchstations and any outside or other watchstation in which safety systems are monitored, such as emergency diesel generators and safety-related cooling water pumps
- Qualifications solely in watchstations in which limited or no safety-related systems are located does not meet this definition for the purposes of licensed candidate eligibility

**Related Experience** – Experience performing job duties similar to those for which the individual seeks qualification and that may or may not be at a nuclear power plant.

**Related Sciences** – This term is used to identify acceptable academic degrees beyond engineering or engineering sciences. These include degrees in computer engineering and engineering technology, physics, chemistry, mathematics and applied mathematics. Degrees in computer sciences, aerospace/aeronautics, health physics, biology, medicine or any other discipline are acceptable if curriculum review indicates at least 80 semester hours of engineering, mathematics, chemistry or physics study. Nontechnical degrees such as forestry, political science, economics and psychology are not acceptable except as noted above.

**Responsible Nuclear Power Plant Experience** - Having actively performed as a licensed nuclear control room operator (RO), as a qualified non-licensed operator (as defined below), or as power plant staff (defined below) involved in the activities (described below) at a commercial nuclear power plant facility. Time spent in classroom training cannot be counted toward responsible nuclear power plant experience requirements. However, time spent performing job-based training and qualification activities in the workplace, such as under instruction execution of power plant staff duties, on-the-job training, and task or power plant staff position qualification activities, can be applied toward responsible nuclear power plant experience requirements. Time spent performing workplace job-based training and qualification activities should be specifically documented if such time is used to meet responsible nuclear power plant experience requirements.

**SRO Certified Instructor** – For the purposes of determining eligibility, an SRO certified instructor is one who has completed initial written and operating examinations to certify SRO-level knowledge

**Total Military Nuclear Experience** – The start date for calculating total military nuclear experience is the date on which military nuclear-power-plant-related initial training is completed. For United States Navy personnel, this is the date on which the candidate graduates from nuclear power school prototype training. End dates are calculated using military discharge dates or dates on which the candidate no longer holds the applicable military nuclear qualifications.