

Nuclear Mechanic Apprenticeship Program  
Frequently Asked Questions

The purpose of this document is to introduce the Nuclear Mechanic Apprenticeship Program in a simple question and answer format to maintenance managers and training managers at NRC-licensed nuclear generating stations. If after reading this document you have questions, please contact \_\_\_\_\_ of \_\_\_\_\_ at 333-444-1515.

**1. What is the purpose of the Nuclear Mechanic Apprenticeship Program (NMAP)? When was it created, why, and by whom?**

The NMAP program was developed in the early 1990s in response to new NRC training-qualification requirements for contractor personnel performing nuclear station maintenance. A group of nuclear utilities associated with the Edison Electric Institute<sup>1</sup>, along with some union maintenance contractors, and training representatives from the Building Trades Unions, formed a tripartite committee to develop a formal method to provide evidence of contracted union labor nuclear qualifications through documented apprenticeship training or long-term service years in the industrial construction/maintenance industry. After several years of research and development, the NMAP program was formally launched January 1, 1996.

**2. Which NRC Licensees participate in the NMAP program?**

Current Licensee participants in the NMAP program include AEP, Entergy, Exelon, and First Energy.

**3. Is there a cost for a Licensee to participate in the NMAP program? Membership fee?**

Participation in the NMAP program is free to all Licensees with a contracted union workforce. There are no membership fees for the Licensees, Contractors, or participating International Unions.

**4. Who are the stakeholders in the NMAP program?**

Primary stakeholders include Licensees (utilities), contractors / employers, and the six Building Trades Unions that participate in the NMAP program, which are the Boilermakers, Electricians, Ironworkers, Millwrights, Pipe Fitters, and Sheet Metal Workers.

**5. Do the stakeholders meet periodically to discuss NMAP-related issues and look for ways to improve the program?**

Stakeholders meet for about 90 minutes quarterly at the AFL-CIO building in Washington, DC. Attendees typically include participating Licensees, Contractors, and senior representatives of the six trades that work under the NMAP. Topics discussed at the meetings include annual training program self-assessments performed by the six unions and the results of annual qualification audits conducted on workers' training records (See Generic NMAP Annual Cycle). Visitors include representatives from EPRI, INPO, and occasionally the NRC.

**6. Why do only six trade unions participate in the NMAP program rather than all?**

Based on a review of the types of work performed by union journeypersons in commercial nuclear facilities, it was determined that the six identified trades (Boilermakers, Electricians, Ironworkers, Millwrights, Pipefitters, and Sheet Metal Workers) were the only ones that performed "Safety Related" nuclear work. That is performing routine maintenance & modification tasks on equipment

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<sup>1</sup> In early 1995, the Edison Electric Institute (EEI) restructured its operation such that the NMAP no longer aligned with its charter. At that point, the sponsoring Licensees (Exelon, Southern California Edison, others) most actively involved in developing the NMAP pursued the effort without formal sponsorship by a recognized industry organization.

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that must work for the protection public health & safety. It is this safety related work that necessitated the need to create the NMAP program to ensure these workers had at least entry-level qualifications to work in the nuclear industry.

### **7. What are some of the NMAP participation benefits to a Licensee?**

Primarily cost savings through removal of redundant basic skills training and better efficiency of productive work hours. A founding purpose of the NMAP process was to establish that union apprenticeship programs provided equivalent minimum training to building trades members that met the requirements of the NRC, and what the Licensees have established for their own mechanics and electricians. Absent the NMAP process, Licensees would be required to qualify each contractor employee through additional and costly basic skills training. In addition, the individual's NMAP qualification is documented and is portable between participating Licensees, thus multiplying those cost savings and efficiencies for as long as the skilled building trades craftsperson may stay active in the nuclear industry. This also meets the goals set by the NEI Nuclear Promise bulletins for greater efficiency and cost saving in the Licensees in-processing for unescorted access badging.

### **8. Are there any disadvantages to NMAP participation for a Licensee?**

No. However, some Licensees have noted the implementation of NMAP at their facilities places a great level of trust on an outside source (i.e. union training centers), and requires shared responsibilities for skills verification with their own training department. Some are unwilling to cross that bridge even when the benefits are immediately achievable and proven to be reliable by the many Licensees that have done so by continuing to participate in the NMAP.

### **9. What are the criteria that determine whether a worker is considered NMAP qualified?**

Workers are considered to be NMAP qualified if they:

- a. Have successfully completed their union's apprenticeship program; or
- b. Have successfully passed an NMAP-qualification equivalency examination developed by the union; or
- c. Have worked a defined number of hours in their trade (varies by trade<sup>2</sup>) prior to January 1, 1996. (Note: this method of NMAP qualification has been almost eliminated due to the demographics of the workforce, leaving a. and b. as the dominant NMAP qualification criteria).

### **10. Are apprentices considered NMAP qualified?**

No, but apprentices can perform safety-related work under the direction and observation of an NMAP-qualified journeyman.

### **11. Can a worker who did not complete an apprenticeship program become NMAP qualified?**

Yes. This worker can either enroll in an approved apprenticeship program or study for and pass his/her union's NMAP equivalency test. The second option serves as a logical path for someone with substantial industry (but nonunion) experience who is recruited by and organized into one of the six NMAP trades.

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<sup>2</sup> Each of the six unions established a set number of industry working hours which, if possessed by a non-apprentice prior to January 1, 1996, would provide assurance that the individual would have gained the same fundamental knowledge and skills as a graduate apprentice. Electricians: 15,000h; Pipe Fitters: 12,000h; Millwrights: 10,000h; Sheet Metal Workers: 10,000h; Boilermakers: 7,500h; Ironworkers: 6,000h.

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**12. How are NMAP qualifications tracked? And by whom?**

First, member NMAP qualifications are tracked by the International Training Departments for all six NMAP trade unions. Second, some participating Licensees record into their Learning Management System (LMS) database the NMAP qualification of each contractor employee hired for Licensee work by its union contractors. Once recorded in the LMS database, there is no further need to require additional documentation each time the worker reports to a Licensee facility regardless of which contractor he/she is employed by.

**13. Are NMAP qualifications evergreen? Or do they expire?**

NMAP qualifications are evergreen for all trades except the millwrights. Millwright qualifications expire after four years unless the millwright completes continuing education courses in the trade. (Millwrights and Ironworkers have union-issued training cards with Q-codes that link directly back to the International Union Training database. Member qualifications for these two unions can be determined quickly, easily, and without the need for paper transfer.)

**14. Besides this FAQ document, are the elements of the NMAP program explained in greater detail elsewhere?**

There is a [link on the website](#) of North America's Building Trades Unions (NABTU) where the NMAP Implementation Handbook and related documents can be downloaded by anyone for free. (*Scroll down after webpage opens.*)

**15. What is the primary function of the NMAP today?**

Since the program itself is well established and working, the primary purpose of the NMAP program today is to ensure that workers performing maintenance or modifications on Safety-Related systems are qualified to do so. Since new workers enter the industry all the time, the need to verify training qualifications never ends. On an annual basis, each participating Licensee submits a list of random contractor worker names (up to 40) from its fleet to each of the participating Unions' Training Departments.

Next, the International Union Training Departments perform an audit of their member names to determine if they are NMAP qualified. Each of the six unions publishes a report of its audit findings and addresses any non-compliance issues. Additionally, each International Union Training Department conducts an annual assessment of its remote training facilities to ensure the curricula being taught and training processes are in compliance with industry standards. (See Generic NMAP Annual Cycle on the NABTU website.)

**16. Are welders within the six NMAP trades required to be NMAP qualified?**

Welders who pass a welder-qualification test under the Licensee's QA program are not required to be NMAP-qualified to weld. However, unless qualified welders also have the NMAP qualifications as explained in the response to Question #9 above, they are not NMAP qualified.

**17. How are contractors or owners initially notified that a worker is NMAP qualified?**

When an NMAP-qualified journeyman is dispatched to an employer where the NMAP program is in place, the referring union is required to provide documentation at the time of referral, signed by the Business Manager of the referring union (or his / her delegate), attesting to the NMAP qualification of the person referred. This requirement exists even if the worker referred is not a

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local union member, but rather a “traveler” from another local union somewhere else. It is up to the local union to determine, prior to referral, whether the journey person is NMAP qualified. Contractors may reject the employment referral of any unqualified worker.

**18. Is this FAQ document intended to provide sufficient information to explain the NMAP program?**

No. The purpose of this document is to lead the reader to additional inquiry into the NMAP program, not explain the program in its entirety.