I’ve been tasked by our management to assess what other utilities are doing to qualify their PWR reactor engineers.  To obtain this benchmarking information the following survey was developed.  It would be appreciated to have your responses by the end of the month (July 2010).

1. Particularly important to me is how long does it typically take to train a new hire to become certified as a QNE?  As a follow-on question, do you put the new hire on a schedule and track their progress?  Do you provide them with any incentives?  Do you provide them with incentives for on-time completion?

Typically it will take 1-2 years for a new hire to become fully qualified. The time depends on the background of the individual (any prior experience) and opportunities for training and task performance. The new hire is given a schedule for site required training (that all engineers must complete) and a list of the RE specific items. A long term plan is developed but may be altered based on site needs, available training opportunities, etc. There are no monetary incentives to completing qualification.

1. What initial training do you give to your new hires?  (e.g., General employee training, system training, blueprint reading, chemistry, etc..)

All new engineers go through Basic Engineer Training, an established course set consisting of 20 modules that are classroom based. This includes a module that has general information for the new hire about the area (we also make a personal effort to make sure the new hire is settling in well and knows where necessary locations are in the area). There are also items assigned based off other commitments (SOER review, etc).

1. How many RE’s per year are typically trained?  Do you coordinate training for a group of RE’s to be trained or do you qualify them individually?

REs are qualified individually. For the last three years we’ve trained 1 RE per year.

1. Do you have internal process/procedures that you follow to qualify or certify the reactor engineers?

We have a procedure that lists the duties and responsibilities for the RE. We also have a program where certain tasks are covered by a qualification record (DQR). The record lists the required reading, what the trainer must cover, and any tasks that must be performed, simulated, or discussed. Once the DQR is signed, the trainee is now qualified to perform the tasks covered by that DQR.

1. Do you provide each new hire with a dedicated mentor through their qualification?

We are a small group, so the two qualified REs are both mentors.

1. Does the qualification process include both classroom and performance (or experience) based objectives?

*Note that I use the term qualified nuclear engineer (QNE) to indicate that the reactor engineer is qualified/certified.*

Yes, the basic engineer training is actual classroom. The RE specific items have “classroom” aspects like reading and discussing that are performed in the admin building as well as actual performance requirements. The DQR specifies what is required.

1. Do you have your own QNE training classes or do you use a vendor for QNE training?  If you use a vendor, who do you use?

Dominion uses its own training program, but we have sent REs to the Westinghouse RE continuing training.

1. How do you cover core monitoring code proficiency (monitoring and predicts)?

It’s part of the DQR process.

1. If applicable, how much simulator time or training with operations is required prior to being qualified?

Depends on what can be accomplished in the actual plant. LPPT is practiced in the simulator usually at least once for the trainee (often times more). There are no specific requirements on time spent with ops-we do, however, ensure there are many opportunities for the trainee to interact with the shifts in order to establish that working relationship.

1. Does QNE qualification include special nuclear material control or custodial qualifications or do you treat this separate from the QNE?

We have a DQR for the SNM tasks RE performs-irradiated fuel inspections and new fuel receipt inspection. We will soon have one for gap inspections as well.

1. After the RE completes all the training and experience objectives, does the RE have to obtain a final approval by an oral review board?  If this is the case, who comprises the board?

Not as one final oral board. Each DQR has the mentor discussion area and the qualifier has the opportunity to (and always does) ask questions prior to signing the qualification.

1. If there is a need for remediation to obtain final approval, how is this done?

If the qualifier does not feel the trainee is ready, the DQR is not signed and the trainee would be given more tasks to practice and the DQR revisited at a later date.

1. Provide your QNE re-qualification requirements, if applicable.

None of our RE DQRs expire except the fuel inspector quals. The FI quals will expire if the annual eye exam is missed or not passed. The re-qual requirement is to pass the eye exam and have the qual updated in the system.

1. Can you provide me with what your typical program costs to take a new hire and have that new hire qualified as a QNE?

All of our training happens in-house so there is not really a cost associated with a single hire.

1. Are there any lessons learned you have in regards to QNE training?

Breaking the training into small pieces, such as by tasks, allows for flexibility (people from other sites can be qualified for specific tasks to help out as needed) and for the trainee to contribute to the group sooner.