Oconee Nuclear on cutting edge of fire safety transition

THE JOURNAL STAFF

SENECA — Oconee Nuclear Station has been granted authority to implement changes that will strengthen the facility's fire protection and will also start the clock running on other nuclear plants around the country to do the same.

The Nuclear Regulatory Commission approved Oconee's adoption of the National Fire Protection Association's "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants."

According to NRC Chairman Gregory B. Jaczko, this is a milestone, not only for Oconee, but for the nuclear industry as a whole.

"After making safety improvements, Oconee becomes the second applicant to receive NRC approval to transition to the new fire protection standard. Approval of Oconee's application also starts a six-month clock for the other reactors to submit their fire protection license amendment requests to the NRC," Jaczko said.

Oconee and the Shearon Harris plant, located 20 miles southwest of Raleigh, N.C., volunteered in 2005 to serve as pilot sites for implementation of the program. Oconee submitted its formal application to switch to the new standards in May 2008 and revised the application in April 2010.

According to Duke Energy spokesperson Sandra Magee, Oconee Nuclear has been conducting engineering analyses to demonstrate that the system will meet specific fire protection and nuclear safety goals and objectives.

"One of our goals was to identify higher risk areas and make sure our focus is there," Magee said.

Oconee's analyses led the plant to make several modifications, including installation of additional fire detection systems and upgraded fire barriers.

"Given our layout, we already had pretty good physical separation," she said. "We are now in the middle of a modification that relates to safely shutting down the plant in the event the control room is not habitable.

"We don't have a history of significant fires," she added, "but this is another layer of protection."

An additional 46 reactors at 29 sites plan to adopt the new fire standards. The NRC expects other U.S. nuclear power plants will consider adopting the approach once the industry gains experience in implementing the standard.

Meanwhile, Oconee is also continuing its conversion from an analog to a digital control system on one of its reactors, an undertaking that will culminate this spring while the reactor is shut down for regular maintenance and refueling.

Operators and technicians have been training on the new digital system for several months.

"They want to be sure every possible scenario thrown at it works — that it performs the way it's supposed to," Andy Sabisch, the NRC's senior resident inspector at Oconee Nuclear Station, told the Greenville News.

The upgrade to digital will help address the problem of aging components at the 38-year-old plant, Sabisch said.

Duke is spending $2 billion to convert the plant to digital.