OCONEE DENIED FIRE SYSTEM

NRC says nuke plant is safe, but wants stronger protections implemented now

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Delay has long been the norm in the high-stakes balance between nuclear power and regulation.

For years now, the Oconee Nuclear Station's colossal three reactors have operated on the shores of Lake Keowee under fire-protection methods that the government says were only meant to be temporary.

However, federal regulators have now taken an unexpected stand — denying the most recent of voluminous deadline extensions Duke Energy has requested through the years as the company works to put its fire-protection practices at the forefront of the nuclear industry.

The Nuclear Regulatory Commission — in recently citing a higher-than-acceptable safety risk under temporary fire-protection measures while at the same time insisting those temporary measures have been sufficient so far — is straddling a line with contradiction on either side.

If the risk of fire is great enough for regulators to stand ground opposite a powerful energy giant, then why are Oco-

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DELAY

OUR NATURAL BEAUTY

The Nuclear Regulatory Commission will conduct a public meeting at Energy at 1 p.m. Wednesday at Oconee Nuclear Station's World of Energy.
Duke Energy officials will discuss major projects at the plant, including the fire-protection efforts.

OCONEE

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nee's reactors still operating?

Or, if the plant can safely operate under interim measures as it has for years, why should a nuclear provider so integral to life in the Upstate be denied a pass in an industry known for the deadlines both it and the government itself frequently don't meet?



ear Station

The NRC insists that the plant is safe from fire, though the agency says the degree of safety could be as much as 40 times less than if Duke had kept to its deadlines.

Duke insists that it is working diligently and that the project is more complex than either it or the government had foreseen.

The answer, nuclear watchdogs say, lies in reading between the lines of a denial that they say borders on the unprecedented — and one that, if held to, could be an indication of a willingness for the NRC to take a stronger stance against criticism that it has become too cozy with the industry it regulates.

"It's kind of like Charlie Brown and Lucy with the football," said Dave Lochbaum, director of the Nuclear Safety Project for the Union of Concerned Scientists. "Duke keeps holding the football and asking the NRC to come kick it — and they keep pulling it away over and over again. I guess the NRC is just getting tired of kicking at those footballs."

Setting a tone

"This is almost unprecedented to me that the NRC would deny a request presented by a licensee," said Tom Clements, director of the Columbia-based Alliance for Nuclear Accountability. "This is highly unusual, and it signifies how serious the NRC is taking this issue."

Duke has a 30-day window to appeal the NRC's denial.

The outcome — for instance a potential plant shutdown — could set a tone for the industry as dozens of reactors must make the transition, said Paul Gunter, director of the Reactor Oversight Project for the Maryland-based Beyond Nuclear watchdog organization.

"This is sort of a push-comes-to-shove moment for fire protection in the nuclear industry," Gunter said. "We really need to see if the NRC will back up its enforcement policy. This plant shouldn't be operating if it can't meet fire-protection qualifications."

The denial is even more astounding given that the NRC recently granted a one-year extension for Brown's Ferry in Alabama, the genesis for the industry's original fire standards following

Lochbaum said.

"What about all the other plants that haven't begun the transition?" Lochbaum said. "If two more years is unacceptable for Oconee, how is it OK for the four dozen other reactors? I guess Oconee spun the wheel of misfortune and it came up 'no' this time."

The NRC determined that the "core damage frequency" rate is at least four times and as much as 40 times greater than if Duke had the pilot measures completed.

However, that determination doesn't mean the agency considers Oconee's reactors unsafe for operation, NRC spokesman Roger Hannah said.

"If the plant were unsafe, we would issue an order and shut them down, and they wouldn't be operating," Hannah said. "But there is a period of time where there may be a reduction in safety margin."

In agreeing to allow Oconee to operate under compensatory measures, the NRC said it had assumed timely completion of the upgrades.

The potential for penalties — including a plant shutdown if orders to meet deadlines are put into place — is real, but at this point the NRC will gather more information, Hannah said.

the plant in compliance with regulations."

Duke spokeswoman Sandra Magee said that the company is committed to completing its "protected service water system" within the next two years.

The company has already implemented a majority of other changes it agreed to as part of the pilot program.

"We will continue to work with the NRC to enhance plant safety and ensure a successful transition to the new fire-protection program," Magee said. "The scope and complexity of the transition to the new fire requirements for a three-unit plant like Oconee is requiring more time."

New regulations

In a letter to Duke Energy earlier this month, the NRC laid out the reasons for its denial in a tug of war spanning nearly a decade.

In 2004, the NRC adopted a new set of regulations that would allow nuclear plants to be more flexible in how they protect nuclear reactors from fire.

The performance-based standards would replace "deterministic standards" adopted more than three decades ago after a fire at Brown's Ferry.

That 1975 fire prompted boiler-plate requirements, ones the NRC said had become burdensome as utilities couldn't adjust their protection methods based on the individual dynamics of their plants.

In 2005, Duke asked the NRC to allow it to implement the standards at Oconee's three reactors first under designation as a "pilot plant."

The designation would allow the NRC to observe the transition and provide guidance, while at the same time allowing Duke to avoid costly fees associated with a formal request to amend its operating license and could operate under the NRC's "enforcement discretion."

In particular, Duke sought to use its planned "protected service water system" to shut down the plant in case back-up controls were unsuccessful.

Plans for the water system were initiated by Duke to protect Oconee's reactors from tornado damage and line breaks. In 2006, Duke shared its intent to install the system by the end of 2010.

Because Oconee was considered a pilot plant, the NRC allowed Duke to submit an incomplete application in May 2008.

In April 2010, Duke submitted a final, "totally revised" application that was approved on the promise that the improvements would be complete before the end of 2012.

Oconee became one of only two pilot plants in the U.S., joining Progress Energy's Harris Nuclear Plant in Raleigh, N.C., which Duke now owns after a merger between the companies.

Duke was allowed to operate under a special license as if it were meeting national protection standards even though the program had not been fully implemented.

In a meeting last January with the NRC and the public at the nuclear station, according to an NRC document, Duke said that it was on schedule to complete the new water system within the next seven months.

However, later that summer, Duke requested an extension to the end of 2014 and told the NRC that by the end of 2012, Oconee would see the first benefits of the new system.

Last November, Duke then told the NRC that the new system wouldn't be completed until the end of 2015 and the first benefits of the system wouldn't be seen until the end of this year.

Meanwhile, Oconee continues today to rely on "compensatory measures."

The temporary measures provide adequate safety, Hannah said.

The denial, he said, is based on how long the plant has been operating under temporary guidelines.

"I don't think there's a component that involves somebody getting tired of somebody doing something or not doing something, as the case may be," Hannah said. "We just looked at the amount of time that they had requested and felt, in this case, that denial was the appropriate action."

The plans to complete the project turned out to be more complex than either the NRC or Duke thought.

"The scope and complexity of the transition to the new fire requirements for a three-unit plant like Oconee is requiring more time," Magee said.

In May 2011, the NRC concluded in a "lessons-learned" policy statement that "both industry and the NRC staff underestimated the complexity and resources necessary" and that the framework for licensing the pilot plants was "complex and ambiguous."

"The level of analysis and required review time for the two pilot plants greatly exceeded industry and NRC staff expectations," according to the document. "The NRC staff anticipates that the review time will decrease as experience is gained from additional (license amendment request) reviews."