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Duke official: Oversight at Oconee will be stepped up

By Anna Mitchell

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ATLANTA — A top Duke Energy official told regulators Wednesday that oversight will be increased at Oconee Nuclear Station in the future as the power plant deals with its second federal review for a safety violation in two years.

Bill Pitesa, Duke Energy's senior vice president for nuclear operations, traveled to Atlanta to explain his company's erroneous response to a problem discovered this summer at the plant's standby shutdown facility. Plant operators had said the facility, used as a backup control center at Oconee in major emergencies, was operational in June before fully testing a set of breakers later proven faulty.

"As part of the Duke Energy fleet, we are fully supportive of Oconee," Pitesa said to regulators. "We are also watching Oconee."

The nuclear site's decisions, he said, would be scrutinized at the corporate level going forward.

"We believe Oconee is still a very important asset to Duke Energy," Pitesa said. "We will invest in it to get the funding and modifications they need to reduce risk."

Preston Gillespie, the site vice president at Oconee, said that in spite of workers' best efforts, they still didn't arrive at the best answers when dealing with the breakers.

"Do we get it?" Gillespie said. "It's an understandable question. You have watched the issues we have struggled with."

Nuclear Regulatory Commission experts are reviewing the case and Duke Energy's explanation, said Jonathan Bartley, chief of the agency's reactor projects in the Southeast. He said he expected a decision within 30 days on what actions may be taken against Duke.

Chances of a system failure, which would cause temperatures to rise inside the reactor, could be one in 100,000 or one in 10 million, depending on the analysis, said Terry Patterson, Oconee's safety assurance manager.

"They are not debating the violations," Bartley said. "The whole purpose of the meeting was to discuss how we will characterize the risk."

The Oconee Nuclear Station just outside Seneca operated under increased federal monitoring for more than a year after plant operators discovered a safety system's water line clogged with the bits of a crumbling gasket in 2009. The utility spent half a year reviewing what happened and changing its systems. After a final inspection, increased oversight was lifted less than nine months ago.

The Nuclear Regulatory Commission's senior resident inspector at Oconee, Andy Sabisch, said such a process is costly and time-consuming for the utility. Duke officials he's talked to view the recent faulty breaker problem as a watershed moment for the plant's operating culture, he said.

"It's a fundamental mindset," Sabisch said, "On a piece of safety-related equipment you should be proving to yourself it is operable instead of assuming it is until you prove it's not."

The standby shutdown facility, in a concrete building away from the plant's three containment towers, would provide 72 hours of power to reactors in a total blackout — possible if hydropower lines from Keowee Lake and lines from outside the area were somehow cut off, Sabisch said.

The facility has a diesel engine and a backup control room where operators could, if necessary, power up emergency electrical heater systems that are inside the plant's containment towers. Heaters are necessary to control pressure — fundamental to this type of reactor's safe operations — inside the plant's three reactors.

The emergency heaters in question Wednesday have never been used at the Oconee Nuclear Station as there has never been an extended blackout.

Still, on June 1, an engineer noticed that the heater systems used breakers that would trip if exposed to high ambient heat — likely in an emergency. The containment building is always a warm place — about 100 degrees — but the plastic breakers would trip as the building's temperature climbed toward 250 degrees, said Patterson.

Sabisch said that because these breakers are inside the containment towers, no one would be able to reset them.

"If there's a problem, the one place you can't go is the containment building," Sabisch said.

Seven days after the engineer discovered the problem, Duke Energy operators replaced the breakers with another type that preliminary testing indicated would work in high heat. They declared the facility operational on June 24, only to have tests 14 days later prove the second set of breakers would also trip.

The breakers were replaced with more durable fuses on Aug. 20 and the standby shutdown has been operational ever since.

Duke built the standby shutdown facility in 1983 with the faulty breakers, and they remained part of the safety system for 28 years.

Sabisch called the faulty breakers a "win-lose" situation.

"They found the problem and then dropped the ball," Sabisch said. "They've got to find a way to leapfrog this into a quick culture change."

The plant has stepped up meetings and additional checks to make sure such mistakes don't happen again, he said.

Duke Energy officials struck a tone of contrition in their presentation to federal regulators as they explained the mistake, why they felt safety risks nevertheless

remained low to moderate throughout, and how they plan to change operations at Oconee in the future.

"Clearly, we are all very disappointed in how we reacted," Pitesa said.

Duke Energy spokeswoman Sandra Magee said late Wednesday that the utility takes the agency's findings seriously, "and will learn everything we can from this situation and apply it going forward."

The nuclear industry, she said, always strives to improve and learn from each other.



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