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Vermont Yankee has more cracks; probe demanded

BRATTLEBORO — A key component at Vermont Yankee nuclear power plant has developed dozens of additional cracks, the plant's owner announced late Thursday.

Entergy Nuclear said that sophisticated technology discovered a total of 62 cracks in the steam dryer during a special inspection during the power plant's ongoing shutdown and refueling. The company had reported last year that there were 16 cracks in the 17-foot-wide steel steam dryer.

The Nuclear Regulatory Commission said that despite the cracks, the reactor was safe to resume operation, but it said the new cracks raised unanswered questions about the plant's ability to withstand the additional pressures that would come with its plans to generate more power.

The large number of cracks quickly caught the attention of the state's congressional delegation. Led by Sen. James Jeffords, I-Vt., the ranking member of the Senate committee that oversees nuclear power plants, the delegation called for federal regulators to do their own investigation into the cause of the cracks in the steam dryer.

"We request that the condition of the steam dryer be fully evaluated, using the techniques of the most recent inspection and any other appropriate means, as the NRC considers Entergy Nuclear's request to produce an additional 100 megawatts of power from Vermont Yankee," said the statement from Jeffords, Sen. Patrick Leahy, D-Vt., and Rep. Bernard Sanders, I-Vt., to NRC Chairman Nils Diaz.

"We believe it is essential that our constituents receive needed information about whether the plant's steam dryer will be able to withstand boosted power conditions and operate safely and reliably," the letter added.

Cracking in steam dryers has been a critical issue in Entergy's ambition to boost power production by 20 percent, or 110 megawatts, because other General Electric-designed reactors have developed cracks in their steam dryers, resulting in failure. Entergy's long-stalled

application for a power boost has been largely delayed over the NRC's concerns about the steam dryer.

According to NRC information, only six reactors out of the 100 commercial reactors in the country have developed such cracks.

The steam dryers are not a safety component by themselves, but their failure, which could result in pieces of steel falling back into large steam valves, which lead back to the reactor, could create serious safety problems.

NRC spokesman Neil Sheehan said Thursday the NRC was sure that the plant was safe to continue to operate and the plant had clearance to resume operation. The plant has been shut down for its regular refueling and maintenance outage since Oct. 24.

But Sheehan said the NRC had asked Entergy for additional information about the cracking issue, a report that is expected by the end of the month.

Sheehan said 16 cracks had been discovered in April 2004, the last time the plant was shut down for its regular refueling and maintenance. He said a testing with increased magnification revealed the additional cracks.

"Our evaluation is these cracks don't pose any sort of a problem," Sheehan said.

He said the NRC and Entergy had concluded that the cracks had been there "a long time," probably "early in the power history of Vermont Yankee." The reactor started operation in November 1972.

Sheehan said he didn't know how big the cracks were, but said they were "very minor."

"We don't believe these pose any problem for restarting," he said.

The uprate or power boost is another matter, he said.

Robert Williams, spokesman for Entergy, said the cracks were "insignificant and didn't pose a safety hazard."

Last year, the plant originally announced finding only four cracks, with one as long as 14 inches and another 3 inches long. They were

cleaned and welded. Months later, the company later increased the number to 16.

Williams said a "high-resolution inspection" had revealed 62 "shallow hairline surface cracks that Entergy, General Electric and the Nuclear Regulatory Commission staff have determined are acceptable because they are not structurally significant."

Williams said the cracks are "similar to those found at other boiling-water reactors." He said the cracks occurred in metal less than a quarter-inch thick, while the "hairline" ones were 1 to 5 inches long.

Unlike the cracks discovered last year, these cracks didn't have to be welded or reinforced, Williams said.

Raymond Shadis, senior technical advisor for the anti-nuclear group New England Coalition, said it was "insulting to the public" that the information was released so late in the day, on the eve of a federal three-day weekend holiday, and leading up to important NRC hearings in Brattleboro on the technical problems of the so-called uprate.

"These (surface) failures are indicators of future structural failures," Shadis said, saying that anyone with commonsense experience in welding, metal fabrication or metalurgy knew that cracking was a precursor to failure.

He said Entergy, having now identified defects which probably existed since plant construction, "should have undertaken an analysis to determine whether or not they would have an effect on future safety."

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