Nuke Plant Could Break Down at Full Power

LOS ANGELES (AP) — The troubled San Onofre nuclear power plant in California could be restarted safely and run at full power, but the risk of a breakdown would increase to vexing levels after 11 months, a report concluded Monday.

The seaside plant between San Diego and Los Angeles hasn't produced electricity since January 2012, when a tiny radiation leak led to the discovery of unusual damage to hundreds of steam generator tubes that carry radioactive water.

A consultant's study prepared for operator Southern California Edison represented an attempt to answer federal regulators who are considering Edison's proposal to restart one reactor, Unit 2.

The restart blueprint calls for a trial run at reduced power, but Nuclear Regulatory Commission staff wanted Edison to show generator tubes don't break during "the full range" of conditions, including at full power.

That appeared to raise an obstacle to the proposed restart. The NRC said it wanted the company to demonstrate that Unit 2 could meet that threshold, or explain how generator tubes would interact with each other if the plant is operating at maximum capacity.

The report found the plant could hit the full-power mark but it would be too risky to remain at that level for more than 11 months because of possible damage to tubing. Edison concluded last year that tube damage could be slowed or stopped by limiting the plant to 70 percent power.

"This evaluation confirms the structural integrity of the Unit 2 steam generators at 100 percent power, as requested by the NRC," SCE's chief nuclear officer, Peter Dietrich, said in a statement.

"While we have no intent to restart Unit 2 at full power, this demonstrates the amount of safety margin we have built into our analyses. We welcome this additional safety analysis but remain steadfast in our commitment to restart Unit 2 at only 70 percent power."

The report projected that even at 70 percent power, the risk of a tube break would increase to an unacceptable level after about a year-and-a-half. Those calculations were based on conditions in its sister, Unit 3, where tube damage was more extensive.

Edison spokeswoman Jennifer Manfre said the company used the Unit 3 benchmark to be as conservative as possible when determining safety margins.

The report comes several weeks after Edison argued, in a separate filing, that 70 percent is, in essence, full power for the five-month trial run.

Under its restart proposal, full power "is 70 percent for the proposed operating period" and meets the federal requirements, the company wrote at the time.

The bill for replacement power, tests and repairs tied to San Onofre topped $400 million last year.

Meanwhile, state regulators are determining if ratepayers should be hit with costs tied to the shutdown, the NRC's investigative arm is looking into information Edison provided to the agency on the generators and environmental activists are pressing to have the plant shut down permanently.

Opponents of the restart warned that the report highlighted looming trouble. They have long argued that Edison should have sought an amendment to its operating license because of design changes in the generators, a process that could take up to two years.

"For a year Edison has said the steam generators were defectively designed, couldn't operate at full power and power must be restricted to 70 percent," said Daniel Hirsch, a lecturer on nuclear policy at the University of California, Santa Cruz, and a critic of the nuclear power industry.

"Edison has suddenly reversed course and now says it is safe to run at 100 percent," Hirsch said. "If it were safe, they wouldn't have to twist logic into a pretzel to try to claim they can run at 100 percent power after a year of claiming they can't."

John Large, a consultant for Friends of the Earth, an advocacy group challenging the restart, said the report amounted to a prediction "that the plant will progressively destroy itself."

"There remain enormous uncertainties with predicting tube wear and this report is not convincing that they know enough to allow restart," said Large, a nuclear engineer.

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