Seawater temps too high for Pilgrim cooling

By CHRISTINE LEGERE
clegere@capecodonline.com
July 18, 2013 2:00 AM

PLYMOUTH — The ongoing heat wave could force Pilgrim Nuclear Power Station to shut down, as soaring temperatures continue to warm the Cape Cod Bay waters that the plant relies on to cool key safety systems.

Pilgrim’s license from the Nuclear Regulatory Commission requires the water being drawn from the bay to be no warmer than 75 degrees. On Tuesday night, the temperature in the saltwater system reached 75.3 degrees and remained above the 75-degree limit for about 90 minutes.

If water temperatures rise and show no sign of lowering, the plant has 24 hours to completely shut down.

"The water temperature will be closely monitored as the heat wave persists," NRC spokesman Neil Sheehan wrote in an email.

The temperature of seawater being drawn from the bay must be low enough to cool the water circulating around the reactor and transform steam from the system back to liquid water.

Although the seawater is warmer when it is discharged back into the bay, it must not be so warm it affects the ecosystem.

The plant produces 680 megawatts of electricity, according to Carol Wightman, spokeswoman for Pilgrim’s owner-operator, Entergy Corp.

“That is enough to provide power to about 680,000 homes and about 15 percent of the electricity used in Massachusetts," Wightman said.

When asked whether Pilgrim has ever been forced to shut down because of rising water temperatures in the bay, Wightman said, "I don't recall ever having to shut the plant down for this."

Sheehan said Millstone Unit 2 nuclear power plant in Connecticut was forced to shut down for several days last summer when ocean water from Long Island Sound became too warm.

"Like Pilgrim, it is limited to 75 degrees," Sheehan said.

The owners of Millstone Unit 2 and Unit 3 have since submitted a request to amend plant licenses to permit water temperature up to 80 degrees, Sheehan said.

"We are in the process of reviewing that request," he said.

Wightman was unable to confirm Wednesday afternoon whether the temperatures have stayed below the 75-degree limit since Tuesday night.

Asked about the dollar impact of a shutdown at Pilgrim, Wightman would not provide specifics.

"It's our policy not to comment on financials," she said. "Anytime we have to power down the plant or shut it down, it affects our opportunity in a competitive market."

Meanwhile, Pilgrim officials declared the "unusual event" — related to Monday's failure of the control room alarms, known as annunciators — terminated just before midnight Tuesday.

"The exact cause of the annunciator failure has not yet been identified," Sheehan said.

"We will continue to evaluate Entergy’s efforts to identify the root cause. Meanwhile the system has been checked and tested and is currently functioning properly."
Mary Lampert, chairwoman of the Duxbury Nuclear Advisory Committee and director of the anti-nuclear group Pilgrim Watch, fired off a letter to NRC officials Wednesday, urging the agency to shut down the Pilgrim plant until the cause of the alarm system failure is found.

"Until that is done, we fail to see how the NRC can provide reasonable assurance for public health and safety," Lampert wrote.

Lampert jokingly called the rising temperatures in the bay and possibility of a shutdown "a sign from God that they should shut down, find out what's wrong with the annunciators and fix them, and fix anything else on the to-do list."

NRC: PILGRIM HAD MEDICAL EXAM VIOLATION

PLYMOUTH – The Nuclear Regulatory Commission has issued a Notice of Violation to Entergy for incomplete medical evaluations of control room operators at Pilgrim Nuclear Power Station, and for allowing operators who failed to meet medical prerequisites to continue in their jobs between March 2008 and October 2011. The violations were determined to be because of turnover in the medical examiners, inadequate training of the new examiner, and lack of oversight of the position. Because Entergy addressed the problems with the medical exams, NRC regional administrator William Dean decided not to recommend that a civil penalty be imposed, which could have been as much as $70,000.

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