N-plants keep watch on fire-retardant material

The Associated Press

CHARLOTTE — Carolina Power & Light Co. has begun round-the-clock fire watches at its two nuclear plants while the Nuclear Regulatory Commission investigates the reliability of a fire-retardant material intended to protect key safety equipment.

The nuclear power industry became concerned this summer after the material, Thermo-Lag, failed government and industry tests and burned. An independent federal investigation last week concluded that regulators ignored reports of problems for nearly a decade.

Two weeks ago, an anti-nuclear group petitioned the NRC to close seven plants nationwide, including CP&L's Shearon Harris plant just southwest of Raleigh.

In June, the NRC ordered all plants that use Thermo-Lag in sensitive areas to post regular fire watches while the agency examines the material.

Of 111 U.S. commercial nuclear reactors, regulators say about 80 use varying amounts of Thermo-Lag.

In addition to the one-unit Harris plant, CP&L's Brunswick plant and Duke Power Co.'s McGuire plant near Charlotte use the material, The Charlotte Observer reported Monday.

Harris and Brunswick, which has two units, have mounted round-the-clock, seven-day-a-week fire watches indefinitely.

Those plants use Thermo-Lag on safety equipment, such as cable conduits, which the material failed to protect during tests. A CP&L spokesman said the areas are protected by sprinkler and fire detection systems.

"Because we already have fire protection systems . . . we feel there is no safety threat currently with this issue," spokesman Elizabeth Bean said. "Clearly we support the research that's being done."

The McGuire station uses Thermo-Lag only around a few motors and a small electrical cable tray, uses that fall outside the tests.

"We were able to prove there was not a need for a fire watch," said Duke spokesman Guynn Savage. An NRC spokesman confirmed that no watches are required at McGuire.

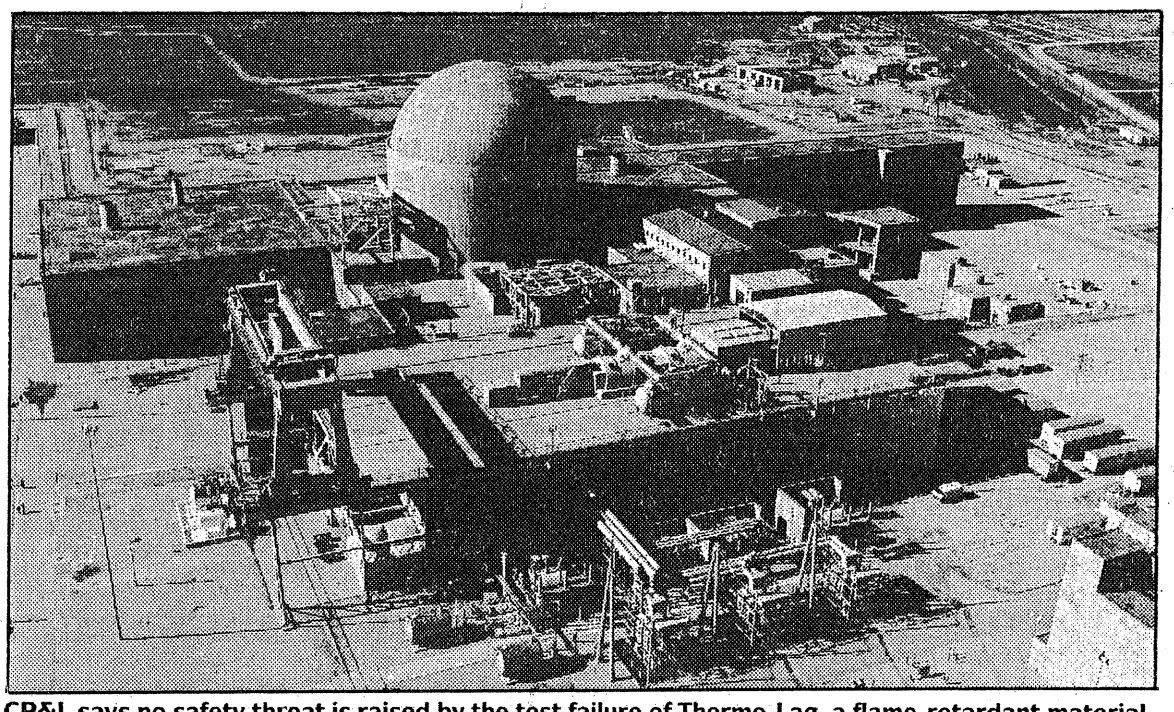
Design engineer James Oldham said Thermo-Lag worked when Duke engineers did a test in which they simulated the burning of Thermo-Lag used in an area not protected by a sprinkler system.

The material is key to nuclear safety. The federal government estimates that a typical nuclear plant will have three to four significant fires in its lifetime.

Thermo-Lag comes in two kinds. One protects electrical systems from fire damage for three hours. The other, for areas with sprinkler systems, protects for one hour.

But in June and July, the substance failed a series of tests, either burning through too quickly or reaching unacceptably high temperatures. The NRC said Thermo-Lag has never failed in an actual nuclear plant fire.

"In recent years, it's one of the most serious problems to come along," said Steven Sholly, senior consultant at MHB Technical Associates, a San Jose, Calif., firm that advises regulators. "It's something that will have to be dealt with in the short-term, not the long-term."



CP&L says no safety threat is raised by the test failure of Thermo-Lag, a flame-retardant material used on equipment at the Shearon Harris Nuclear Plant near New Hill

Thermal Science Inc. of St. Louis makes Thermo-Lag, a rigid material that looks like gypsum wallboard. The company says it is effective if properly installed.

The industry began using Thermo-Lag after the 1975 fire at the Browns Ferry plant in Alabama, the worst U.S. nuclear plant fire ever.

Earlier this month, a Washington-based anti-nuclear group, the Nuclear Information & Resource Service, demanded that federal regulators suspend the operating license of Harris and six other plants because of Thermo-Lag safety problems.

Michael Mariotte, the group's executive director, called Thermo-Lag a "clear and present danger to our citizens." The NRC rejected the request last week.

The regulators said they haven't determined whether Thermo-Lag is an effective fire barrier. But because typical fires aren't as severe as those in tests, the NRC said questions about the fire barriers pose no "immediate threat to public health and safety."

Last week, in an unusual report, the NRC inspector general faulted regulators for failing to respond to reports of problems with Thermo-Lag between 1982 and 1991.

Nuclear consultant Sholly estimates utilities would have to spend "millions to tens of millions" of dollars for replacement, depending on the amounts at their plants.

Bean of CP&L said the issue may be solved in one of two ways. Companies probably will have to alter the way Thermo-Lag is used or replace it entirely, she said.