



NRC NEWS

U.S. NUCLEAR REGULATORY COMMISSION

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NRC ACCEPTS INSPECTOR GENERAL FINDINGS REGARDING HEMYC FIRE BARRIER TESTING

The Nuclear Regulatory Commission staff is working to address the findings of a special inquiry from the agency's Inspector General into the agency's actions to confirm the acceptability of the fire barrier material Hemyc. A few U.S. nuclear power plants use this material to protect electrical cables that enable a plant to shut down safely.

"We agree with the IG – the staff could have acted more promptly in investigating what turned out to be Hemyc's limited ability to protect important electrical systems," said Jim Dyer, Director of the NRC's Office of Nuclear Reactor Regulation. "We remain convinced, however, that every U.S. plant's overall fire protection program ensures it can shut down safely. The staff is reviewing the IG findings to determine how we can improve our performance in the future."

The NRC requires U.S. nuclear power plants to protect their safety-related systems against fires. The agency updated these requirements in 1981 following a fire at the Browns Ferry nuclear power plant in 1975. The first use of Hemyc as an electrical cable fire barrier to meet NRC requirements was in 1983, based on the manufacturer's test data. Today, there are 16 reactors (out of 104) using the material.

Under the NRC's direction, the National Institute of Standards and Technology conducted a small-scale test in 1993 that called into question Hemyc's fire endurance. NRC staff efforts did not produce a follow-up test until April 2005, with the results failing to confirm the manufacturer's assertion that Hemyc could act as a one-hour fire barrier. The staff then issued a Generic Letter in 2006 (<http://www.nrc.gov/reading-rm/doc-collections/gen-comm/gen-letters/2006/gl200603.pdf>) requiring all U.S. nuclear power plants to document how the plants will resolve the Hemyc issue.

The IG found the staff has yet to budget or schedule any inspections specifically reviewing plants' Hemyc resolution efforts. The staff points out, however, that it has found all the Generic Letter responses acceptable, and that two ongoing programs will continue to ensure the Hemyc issue does not affect fire protection safety:

- continuing staff oversight of the Shearon Harris plant's first-of-its-kind transition to a risk-informed fire protection program, where all aspects of existing protection, including Hemyc, are reviewed;
- routine reviews of plant fire protection by NRC inspectors.

The IG also found no evidence of additional Hemyc tests between April 2005 and December 2007, but the staff notes that Progress Energy conducted such tests in 2005 and 2006. The staff will continue to monitor the Hemyc issue to ensure nuclear power plants properly protect their safety-related systems against fires.

The IG Special Inquiry is available on the NRC's Web site at: <http://www.nrc.gov/reading-rm/doc-collections/insp-gen/2008/> . A staff memo listing all plant responses to the generic letter, including whether a plant is using Hemyc, is available by entering ML073470708 on this Web page: <http://adamswebsearch.nrc.gov/dologin.htm> .

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