

April 7, 2008

The Honorable David E. Price  
United States House of Representatives  
Washington, D.C. 20515

Dear Congressman Price:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated February 15, 2008, regarding the NRC Inspector General (IG) report on "NRC's Oversight of Hemyc Fire Barriers," dated January 18, 2008. You noted concerns from the IG report that: (1) the NRC has not provided adequate oversight of important fire protection requirements for more than a decade; (2) the NRC staff has yet to schedule inspections to review plants' efforts to resolve Hemyc issues as they committed to in response to Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations;" (3) the NRC failed to address data from a 1993 National Institute of Standards and Technology (NIST) study; and (4) the NRC should demonstrate to the public that it is being responsive and transparent.

While the Hemyc issue was not resolved immediately after the 1993 study, the NRC took appropriate actions commensurate with the significance of the safety concern represented by the reduced Hemyc fire barrier resistance. Operating reactors with Hemyc fire barriers have been safe throughout this period of time and remain safe today. The extent of the Hemyc issue was limited to only 16 of the 104 operating nuclear units. The safety significance of the Hemyc issue was low because the other components of fire protection, prevention and detection and suppression, remained intact. Today, the Hemyc issue has been completely resolved at 5 of the 16 affected units, and compensatory measures remain in place at the other 11 affected units, pending final resolution.

The NRC's Reactor Oversight Process (ROP) continues to ensure that reactors are operating safely and in accordance with applicable regulations. Fire protection experts conduct comprehensive fire protection design inspections every 3 years at each of the operating units. Our onsite Resident Inspectors also inspect fire protection controls and equipment quarterly and fire brigade training annually. Inspectors review fire protection equipment design, operational safety programs, and the control of transient combustibles and ignition sources. They also examine the resolution of corrective actions for deficiencies in areas such as Hemyc fire barriers. In conjunction with the ROP's upcoming quarterly fire protection inspections, NRC inspectors plan to complete verification of the adequacy of compensatory measures for all 11 affected units by September 30, 2008. Similarly, NRC inspectors have verified the adequacy of the final resolution of Hemyc issues at 3 units, and verification of the adequacy of final resolution at the remaining 2 units will be completed by September 30, 2008. As always, fire protection issues identified by our inspectors will be assessed for safety significance and documented in publicly available inspection reports. Therefore, the NRC continues to rely on the ROP to provide oversight of both fire protection requirements in general, and the resolution of Hemyc issues in particular.

The NRC was already addressing fire barrier issues before the 1993 NIST study was published. The NRC had previously identified significant and prevalent concerns with the Thermo-Lag fire barrier material, and the purpose of the 1993 NIST study was to evaluate whether other materials, including Hemyc, were subject to the same failure mode as Thermo-Lag. Because Hemyc did not show the failure mode associated with Thermo-Lag during the 1993 NIST study, the NRC was able to prioritize its resources to address the more safety significant issues associated with the Thermo-Lag failure mode. The NRC has continued to pursue all fire barrier issues commensurate with their safety significance. Specifically, the NRC has (1) obtained and reviewed design and test information from electrical raceway fire barrier vendors; (2) observed installed fire barrier configurations at selected reactors; (3) performed small-scale fire barrier tests of selected fire barrier materials (the 1993 NIST study); (4) issued several publicly available generic communications on fire barriers; (5) issued updated guidance on fire barrier testing and acceptance criteria; and (6) conducted improved fire protection inspections at selected reactor sites. In 1999, NRC inspectors identified concerns with the manufacturer's fire qualification tests for the Hemyc fire barriers at the Shearon Harris plant and subsequently initiated full-scale fire testing of Hemyc. In 2005, the NRC completed full-scale Hemyc fire testing and issued Information Notice 2005-07, "Results of HEMYC Electrical Raceway Fire Barrier System Full Scale Fire Testing."

In 2006, the NRC issued GL 2006-03: "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," to all operating reactor licensees, which required licensees to describe the extent of their use of Hemyc barriers, any compensatory and corrective actions, and how other installed fire barriers meet fire resistance requirements. To ensure continued plant safety, all affected licensees have implemented compensatory measures and corrective actions in response to GL 2006-03.

The NRC activities continue to be responsive and transparent to the public. Through the ROP, we will continue to inspect licensees' fire protection programs and corrective actions to resolve deficiencies. In addition, the NRC is currently reviewing the Inspector General's findings to determine how we can improve performance in the future.

In summary, the NRC has taken actions to address the Hemyc issues and continues to ensure that all operating reactors are safe. If you need additional information in this matter, please do not hesitate to call me.

Sincerely,

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Dale E. Klein