

September 11, 2008

The Honorable Joseph I. Lieberman  
Chairman, Committee on Homeland Security  
and Governmental Affairs  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am providing a summary of the status of the actions that the NRC has taken or plans to take in response to recommendations made by the U.S. Government Accountability Office (GAO) in its June 2008 report entitled, "Nuclear Safety: NRC's Oversight of Fire Protection at U.S. Commercial Nuclear Reactor Units Could Be Strengthened" (GAO-08-747). The NRC appreciates the time and effort that GAO invested in reviewing this important topic. The NRC staff reviewed the report and found that it was complete and accurately identifies the accomplishments made as well as the challenges faced by the NRC in the area of fire protection for commercial nuclear reactors.

The NRC's responses to the recommendations made in GAO-08-747 are described in the enclosure.

Sincerely,

*/RA/*

Dale E. Klein

Enclosure:  
Summary of NRC Actions

cc: Senator Susan Collins

Identical letter sent to:

The Honorable Joseph I. Lieberman  
Chairman, Committee on Homeland Security  
and Governmental Affairs  
United States Senate  
Washington, D.C. 20510  
cc: Senator Susan Collins

The Honorable Henry A. Waxman  
Chairman, Committee on Oversight  
and Government Reform  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Tom Davis

The Honorable Barbara Boxer  
Chairman, Committee on Environment  
and Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator James M. Inhofe

The Honorable Thomas R. Carper  
Chairman, Subcommittee on Clean Air  
and Nuclear Safety  
Committee on Environment & Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator George V. Voinovich

The Honorable John D. Dingell  
Chairman, Committee on Energy  
and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Joe Barton

The Honorable Rick Boucher  
Chairman, Subcommittee on Energy  
and Air Quality  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Fred Upton

The Honorable Peter J. Visclosky  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative David L. Hobson

The Honorable Byron Dorgan  
Chairman, Subcommittee on Energy  
and Water Development  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510  
cc: Senator Pete V. Domenici

The Honorable David R. Obey  
Chairman, Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Jerry Lewis

The Honorable Robert C. Byrd  
Chairman, Committee on Appropriations  
United States Senate  
Washington, D.C. 20510  
cc: Senator Thad Cochran

The Honorable Bennie G. Thompson  
Chairman, Committee on Homeland Security  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Peter T. King

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

The Honorable Gene L. Dodaro  
Acting Comptroller General of the United States  
U.S. Government Accountability Office  
Washington, D.C. 20548  
cc: Mark Gaffigan, GAO

**Summary of NRC Actions in Response to GAO Report  
“Nuclear Safety: NRC’s Oversight of Fire Protection at  
U.S. Commercial Nuclear Reactor Units Could Be Strengthened”  
June 2008**

In its report entitled “Nuclear Safety: NRC’s Oversight of Fire Protection at U.S. Commercial Nuclear Reactor Units Could Be Strengthened,” the U.S. Government Accountability Office (GAO) made four recommendations to help the U.S. Nuclear Regulatory Commission (NRC) better manage its oversight of fire protection at U.S. commercial nuclear reactors.

The NRC staff is implementing actions to address key fire protection issues. In July 2008, the Commission directed the NRC staff to include in its Fire Protection Closure Plan milestones and deliverables, as well as meaningful metrics to gauge the progress of improvement. As part of this initiative, the NRC staff plans to establish a baseline against which to measure improvement by employing current plant data. Such a baseline could include, for example, the number and general type of open fire protection deficiencies that have compensatory actions. The Closure Plan will also include training of NRC staff on the important historical lessons learned in the area of fire protection. The Closure Plan will be finalized in CY 2008. Following the staff’s submission of the Closure Plan to the Commission, the agency will provide a copy.

The following provides a summary of the actions that the NRC has taken or plans to take in response to the specific GAO recommendations.

Recommendation 1:

Develop a central database for tracking the status of exemptions, compensatory measures, and manual actions in place nationwide and at individual commercial nuclear units.

Status:

All granted fire protection exemptions have been evaluated by the NRC to ensure that equivalent safety was accomplished. In response to the GAO’s recommendation, the NRC plans to develop a centralized database of fire protection exemptions for operating nuclear reactors.

At the present time, licensees track fire protection program deficiencies involving compensatory measures and manual actions at their respective nuclear plants. NRC inspectors inspect a sample of these compensatory measures and manual actions during their routine fire protection inspections. Based on these inspections, the NRC has determined that existing compensatory measures and manual actions are sufficient to ensure adequate fire protection at each nuclear plant, but the work discussed in response to Recommendations 2 - 4, will provide greater confidence in this determination.

Recommendation 2:

Address safety concerns related to extended use of interim compensatory measures by:

- defining how long an interim compensatory measure can be used and identifying the interim compensatory measures in place at nuclear units that exceed that threshold,

Enclosure

- assessing the safety significance of such extended compensatory measures and defining how long a safety significant interim compensatory measure can be used before NRC requires the unit operator to make the necessary repairs or replacements or request an exemption or deviation from its fire safety requirements, and
- developing a plan and deadlines for units to resolve those compensatory measures.

Status:

The NRC has concluded that compensatory measures provide adequate protection to ensure the health and safety of the public until full compliance with fire protection requirements can be restored. The NRC recognizes that some of these compensatory measures have existed for an extended period of time. While it is not ideal to rely on compensatory measures for extended periods, the fact that some of these measures have existed for longer than desired, does not introduce a safety concern. The fire protection programs at nuclear power plants are built upon the concept of defense in depth with layers of protective features. The technical deficiencies being compensated do not invalidate the defense in depth approach. As discussed in the response to Recommendation 1, NRC inspectors periodically inspect a sample of each plant's fire protection compensatory measures for adequacy.

The NRC staff is implementing a Fire Protection Closure Plan as described above to resolve the issues contributing to the long term use of compensatory measures. The Commission has directed the staff to include meaningful metrics to gauge progress in implementation of the Closure Plan.

Recommendation 3:

Address long-standing concerns about the effectiveness of fire wraps at commercial nuclear units by analyzing the effectiveness of existing fire wraps and undertaking efforts to ensure that the fire endurance tests have been conducted to qualify fire wraps as NRC-approved 1- or 3-hour fire barriers.

Status:

Since the early 1990's, the NRC has been working to address issues related to fire wraps, also known as electrical raceway fire barrier systems. Specifically, the NRC has reviewed design and test information from fire barrier vendors, observed installed fire barrier configurations at selected nuclear power plants, and performed small-scale fire barrier tests of selected fire barriers. This resulted in updated NRC guidance on fire barrier testing and acceptance criteria.

In addition, there are periodic inspections to ensure plant safety, there has been additional fire barrier testing, issuance of generic communications, and in some cases the issuance of confirmatory orders to some licensees. A major part of the NRC's efforts to resolve the remaining known fire barrier problems (associated with Hemyc and MT materials) is the April 10, 2006, issuance of Generic Letter 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations." Based on information received from licensees' responses to this generic letter, the NRC staff plans to complete inspection efforts to close out Hemyc and MT related issues for plants that have not committed to adopt 10CFR50.48(c) (NFPA 805) by December 31, 2008. Plants that are transitioning to 10CFR50.48(c) will disposition their Hemyc and MT electrical raceway fire barrier systems as part of their transition.

Recommendation 4:

Address long-standing concerns by ensuring that nuclear units are able to safeguard against multiple spurious actuations by committing to a specific date for developing guidelines that units should meet to prevent multiple spurious actuations.

Status:

Since the mid-1990's, the NRC has been actively working toward closure of the complex issue of fire-induced circuit failures. This effort has included inspections to ensure plant safety, circuit testing, interaction with industry, issuance of generic communications, and updated guidance. As part of this effort, on June 30, 2008, the NRC staff presented to the Commission, via SECY-08-0093, an approach for resolving the fire-induced circuit failure issues. The Commission approved SECY-08-0093 on September 3, 2008.

The NRC staff plans to follow this approach, which includes the development of supporting guidelines in early FY 2009, in order to bring the issue to closure.