

**POLICY ISSUE
(Information)**

November 5, 2008

SECY-08-0171

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: PLAN FOR STABILIZING FIRE PROTECTION REGULATORY
INFRASTRUCTURE

PURPOSE:

To provide the Commission with an update on the U. S. Nuclear Regulatory Commission (NRC) staff's development of the Fire Protection Closure Plan for stabilizing the fire protection regulatory infrastructure, in accordance with the direction to the staff provided in Staff Requirements Memorandum (SRM) M080717, entitled, "Briefing on Fire Protection Issues," dated July 29, 2008.

BACKGROUND:

In SRM-M080717, the Commission directed the staff to provide a Fire Protection Closure Plan including milestones and deliverables. The Commission also directed the staff to include options for accelerating the completion of the various fire protection issues and the applicable budget implications.

In SRM-M080717, the Commission directed the staff to include budget implications for accelerating the completion of the various fire protection issues on FY 2009 and FY 2010 budgets in the Fire Protection Closure Plan. Several tasks included in the Closure Plan as a result of the SRM-M080717 and the U.S. Government Accountability Office (GAO) audit of fire protection are not budgeted for FY 2009 and FY 2010. The staff will provide the budget implications of these tasks and the options for accelerating completion of all critical fire protection tasks in December 2008.

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The staff has completed the following significant tasks since the July 17, 2008, fire protection briefing to the Commission:

- Staff completed the acceptance review of the first-of-a-kind license amendment request for Shearon Harris Nuclear Power Plant for a proposed amendment to transition to the new fire protection licensing basis under the requirements of Title 10 of the *Code of Federal Regulations*, Section 50.48(c), National Fire Protection Association Standard 805 (NFPA 805). That application was accepted for staff review. This was documented in a letter dated September 26, 2008, to the licensee.
- The staff confirmed through inspection that licensees not transitioning to NFPA 805, where their fire protection program includes Hemyc and MT fire barrier materials, have resolved issues with the Hemyc and MT materials by completing plant modifications and/or requesting and receiving NRC staff approval of changes to their licensing bases. For those licensees transitioning to NFPA 805, the staff has confirmed that appropriate compensatory measures are in place for deficient Hemyc materials during the quarterly inspections conducted by the resident inspectors. These compensatory measures will remain in place pending the completion of the transition.

DISCUSSION:

The enclosure includes a Closure Plan that provides milestones and deliverables to stabilize the regulatory infrastructure pertaining to:

- NFPA 805;
- Hemyc and MT electrical raceway fire barrier systems, fire-induced circuit failures, and post-fire operator manual actions;
- the effectiveness of ongoing improvements to the fire protection regulatory framework using recent plant data;
- training for the staff on important fire protection historical lessons;
- recommendations made by the U.S. Government Accountability Office (GAO); and
- a survey of internal stakeholders to identify any additional fire protection regulatory framework issues that require action.

This Closure Plan is an update of the plan issued by the Fire Protection Steering Committee in July 2008. It includes those staff actions necessary to establish the regulatory stability of fire protection infrastructure (provided as background where applicable), establish structure for enforcement, develop implementing guidance (e.g., issuance of regulatory guides and standard review plans), and validate the adequacy of that implementing guidance. The Closure Plan does not include routine staff actions such as evaluating operating experience, performing inspections, completing licensing action reviews, and conducting research. The staff plans to provide periodic (semiannual) updates to the Commission regarding implementation of this

Closure Plan.

The following three specific examples of routine staff activities are currently underway:

- Follow-up actions with respect to Generic Letter 2006-03. The staff reviewed licensee responses to Generic Letter 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," and ensured that Hemyc was properly dispositioned by completing inspections of Hemyc related plant modifications and review and approval of Hemyc related licensing actions. We will begin verification of licensees' responses on other electrical raceway fire barrier systems to ensure that they have been qualified for their applications.
- Documenting the results of completing electrical raceway fire barrier system actions. The staff is preparing a NUREG series report similar to the one for penetration seals (NUREG-1552, "Fire Barrier Penetration Seals in Nuclear Power Plants," issued July 1996) that will document the completion and closure of this complex issue. The report will consolidate documentation regarding all known raceway fire barrier systems including their effectiveness, information regarding the fire endurance testing of the systems, and how the NRC achieved closure for any related open issues. These systems include but are not limited to Thermo-Lag, Kaowool, and Hemyc. If any new issues are identified by this study, the staff will add them to the Closure Plan.
- Direct Current Circuit (DC) testing program. The body of knowledge related to fire-induced circuit failures has mainly been generated as a result of fire testing of alternating current (AC) circuits. Some recent testing performed by the industry has indicated that the results for AC circuits may not be fully representative of what might occur as a result of fire-induced damage to DC circuits. The staff has decided to perform fire testing of cables using configurations that are representative of safety significant DC circuits and components in order to better understand the probability of spurious actuations and the duration of those actuations in DC circuits. If any new issues are identified by this study, the staff will disposition them appropriately and may add them to the Closure Plan.

The Commissioners

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COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.

/RA Bruce Mallett for/

R. W. Borchardt
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for Operations

Enclosure:
Fire Protection Closure Plan

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